Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers	)	CC Docket No. 01-338
	)	
Implementation of the Local Competition Provisions of the Telecommunications Act of 1996	)	CC Docket No. 96-98
	)	
Deployment of Wireline Services Offering Advanced Telecommunications Capability	)	CC Docket No. 98-147

COMMENTS OF COVAD COMMUNICATIONS COMPANY

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INTRODUCTION AND SUMMARY

In passing the Telecommunications Act of 1996, Congress overhauled the nation's communications laws with one simple goal: to bring innovative and competitively priced telecommunications services to "all Americans by opening all telecommunications markets to competition."[1] In undertaking this second review of its unbundling rules, the Commission remains under a statutory mandate to open the nation's monopoly local telecommunications networks to competition. It is beyond question that Section 251 of the Act,[2] the core market-opening provision of that groundbreaking legislation, is a clear congressional mandate to the Commission to take the steps necessary to "promote competition."[3] The question in this proceeding is not whether unbundling of the incumbent local exchange carrier ("ILEC") networks is an appropriate policy decision – Congress has already answered that question with a resounding yes, and the Commission must give meaning to its statutory unbundling mandate.[4] Rather, the question now before the Commission is the extent to which its existing unbundling rules are sufficient to satisfy Congress's directive to the Commission to "promote competition."

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[1] Joint Statement of Managers, S. Conf. Rep. No. 104-230, 104th Cong., 2d Sess., at 1 (1996).

[2] Communications Act of 1934 ("Act") as amended by the Telecommunications of 1996 ("1996 Act").

[3] Preamble, Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, codified at 47 U.S.C. §§ 151 *et seq*. The ILECs prefer to focus on the language in the Preamble to the Act that evidences congressional intent to "reduce regulation." It is important to note, however, that Congress could not have intended that the Commission reduce regulation that, at the time of the passage of the Act, did not exist. Thus, Congress intended to "reduce regulation" such as long distance restrictions on the Bell Operating Companies and other Modified Final Judgment (MFJ)-related legacy regulations. *See*, *e.g.*, *BellSouth Corp. v. FCC*, 144 F.3d 58, 61 (D.C. Cir. 1998 ("The 1996 Act rescinded the [MFJ] . . . and changed the entire telecommunications landscape."). Thus, the Commission should not (and, indeed, logically cannot) consider itself under a congressional mandate to reduce regulations adopted pursuant to the 1996 Act itself.

[4] Nor is the question, as discussed in greater detail below, whether the existence of a retail cable modem service obviates the need for the Commission to comply with that statutory unbundling mandate. The answer, clearly, is no.

Competition is the hallmark of the Commission's broadband policy. As the Commission reported to Congress in February, "the existence of competition among providers benefits consumers by increasing the range and quality of service offerings, while reducing the price of services."[5] As set out in great detail in these comments, the Commission has already put in place simple, fair, and pro-competitive unbundling rules that have formed the basis for facilities-based competition, as Congress envisioned. Now that the capital markets have turned from friend to foe, and the telecommunications industry is in crisis mode, the Commission's guiding policy in this proceeding should be to continue to foster competition, as it is required to do under the Act. The Commission should continue to bet on competition as the driver of innovation, investment and consumer welfare. The Commission should not pick winners or losers, as the ILECs would like it to do; it should not pick the Dell Computer of the local telecommunications marketplace, and certainly it should not make the world safe only for IBM.

Consistent with its congressional mandate to encourage broadband competition, the Commission has made bottleneck elements of the monopoly local telecommunications network available for lease by competitors. The Commission has also implemented the congressional unbundling mandate by ensuring that requesting carriers pay the ILECs' costs plus a reasonable profit for such elements.[6] ILECs in this proceeding will argue that the Commission should scale those unbundling rules back on a massive scale. As a facilities-based provider that purchases UNE loops and transport from the ILEC owners of those bottleneck facilities, Covad is in a unique position to demonstrate the harm to UNE-based competitive broadband providers that would result

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[5] *Report to Congress Pursuant to Section 706,* FCC 02-33, at ¶ 150 (rel Feb. 6, 2002).

from such an about-face. Indeed, the lack of capital, and the paucity of CLECs that remain financially viable, unequivocally makes a stronger case for retaining the current list of UNEs used by broadband providers than when the Commission decided the *UNE Remand Order*.[7] Toward that end, Covad argues below:

- ILEC loops of all kinds (including copper, fiber, and line shared loops compatible with DSL, as well as DS-1 loops) are bottleneck facilities that simply could not be replicated or bypassed (using, for example, cable, competitive fiber, satellite, or wireless facilities);

- ILEC transport between central offices is the only ubiquitous alternative available to competitive LECs like Covad; and

- Competitive LECs like Covad would be impaired in offering their services without access to ILECs' operations support systems ("OSS"), because (a) only the ILECs have information about their networks sufficient for Covad to order unbundled network elements, and (b) only ILECs have electronic interfaces to their provisioning systems for network elements that are scaleable for CLECs.

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[6] Indeed, Covad alone pays over $10 million each month to the incumbent phone companies to lease such elements.

[7] *Implementation Of The Local Competition Provisions Of The Telecommunications Act Of 1996*, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, CC Docket No. 96-98, FCC 99-238 (rel. November 5, 1999) ("*UNE Remand Order*").

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COMMENTS OF COVAD COMMUNICATIONS COMPANY

Covad Communications Company ("Covad"), through undersigned counsel, hereby submits these comments in response to the Commission's Notice of Proposed Rulemaking, FCC 01-361 (rel. December 20, 2001) ("NPRM") in the above-captioned proceedings.

BACKGROUND ON COVAD

Covad is the leading national broadband service provider of high-speed Internet and network access utilizing Digital Subscriber Line ("DSL") technology. Covad offers DSL, T-1, managed security, IP and dial-up services directly and through Internet service providers, value-added resellers, telecommunications carriers and affinity groups to small and medium-sized businesses and home users. Covad services are currently available across the United States in 94 of the top Metropolitan Statistical Areas ("MSAs"). Covad's network currently covers more than 40 million homes and business and reaches nearly 45 percent of all homes and businesses in the United States.

DSL is a broadband data service that offers consumers and small/medium sized businesses high-speed connectivity over unbundled loops with data speeds that are at least twenty times faster than conventional dial-up modems. Covad is a facilities-based provider of telecommunications services. To offer service to its customers, Covad purchases and deploys DSL equipment in ILEC central offices across the country[8] and connects to the end user via unbundled loops and line sharing and unbundled interoffice transport. With collocated facilities in over 1700 central offices, and over 350,000 customers nationwide, Covad is likely the nation's largest purchaser of standalone[9] unbundled loops and line sharing network elements. In order to facilitate ordering of those network element, Covad has built EDI ("Electronic Data Interchange") capabilities as a part of its own operations support systems ("OSS") that bond with the OSS of each of the major ILECs.[10] Covad is able to serve nearly 45% of all homes and businesses in the United States by accessing the unbundled loop, line sharing and transport elements of the ILECs.

At a time of crisis in the telecommunications industry, Covad has emerged in recent months with one of the strongest balance sheets in the sector. In the second half of 2001, Covad acted quickly and decisively to minimize its debt by entering into a pre-negotiated restructuring of its balance sheet, in which it agreed to pay creditors approximately $.19 on the dollar on about $1.4 billion in debt and give its creditors a 15% ownership stake in the company. Covad concluded its Chapter 11 proceeding in

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[8] To build a nationwide broadband company, Covad had to raise over $2.1 billion in debt ($1.4 billion approximately) and equity ($0.7 billion approximately). Covad hopes to increase its central office footprint to 1800 in the near term.

[9] Standalone loops are not UNE-P loops.

[10] Although Covad has successfully deployed EDI capabilities with all four BOCs, BellSouth continues to refuse to make EDI ordering capability available for several of the DSL-capable loop products

four short months. Covad worked hard to limit the adverse impacts of its bankruptcy proceeding on its operating companies, the service it provided its wholesale and direct customers, its employees, its ILEC and other vendors, as well as all of its stakeholders.

Covad has placed a stake in the ground that its business will be profitable next year, and it has started delivering on that promise. Resurrecting itself after its bankruptcy last year, Covad's growing annual revenue-per-employee today has pulled even with that of the ILECs, while its revenue-to-debt ratio also compares favorably.[11] Despite the storms in the capital market that have wrecked the businesses of many CLECs, Covad has a viable business today – although it is still about 18 months away from generating positive free cash flow from operations. Covad's monthly cost of providing service to its current subscription base (total costs, excluding Sales, General & Administrative expenses and capital investments) breaks down as follows:

- ILEC loop costs are approximately 22% of monthly costs;
- ILEC dedicated transport costs are approximately 25% of monthly costs;
- ILEC collocation costs (including rent and power) are approximately 15% of monthly costs;
- Covad's operations costs (e.g., salaries and related costs) are approximately 25% of monthly costs; and
- Other miscellaneous costs of service are approximately 13% of monthly costs.[12]

It is important for the Commission to understand how its unbundling rules directly impact Covad's ability to serve customers over the facilities-based network it built after

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ordered by Covad. *See* Covad Comments in Opposition to BellSouth Second Joint § 271 Application for Georgia and Louisiana, CC Docket No. 02-35 (filed March 4, 2002).

[11] *See* Appendices A & B (attached hereto).

[12] *See* Joint Declaration, ¶ 10. These figures do not reflect the fact that Covad still faces a competitive deficit in geographic coverage vis-a-vis the ILECs (who have 3200 DSL-equipped central

raising nearly two billion dollars of risk capital. Specifically, Covad has relied on those rules in:

- Raising nearly two billion dollars and building a nationwide broadband network based on facilities and equipment that utilize DSL technology (as opposed to some other mechanism for delivering broadband services);
- Collocating DSL equipment to access loops, line sharing, and interoffice transport in ILEC central offices;
- Designing Covad's inter-central office network and overall backhaul network;[13]
- Building Covad's OSS, which includes automating all of the functions of ordering UNEs in order to reduce costs, increase efficiency and reduce prices so Covad can meet consumer demand;
- Building interfaces from Covad's OSS to the ILECs' OSS;
- Marketing and offering service to millions of American consumers, small and medium sized businesses, and other broadband customers, based on the availability of UNEs to support those service offerings; and
- Generally, developing a financially viable broadband business that is fully funded under the Commission's current UNE rules, serves over 350,000 residential and business customers, and offers nearly 45% of the nation access to innovative, competitively priced broadband services that would otherwise not be available.

In short, Covad designed its entire business, which currently installs over 15,000 new DSL lines for consumers and businesses every month, around the Commission's existing list of UNEs. Now, Covad is trying to defray massive fixed costs and turn a profit by maximizing the utilization of its network (so that it will enjoy economies of scale as ILECs do).[14] If the FCC downgrades or eliminates the unbundling rules upon which

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offices to Covad's 1700). Covad is experiencing additional costs as it modestly increases its 1700 central office footprint to approximately 1800 in the near term.

[13] *See Id.* , ¶¶ 8-9.

[14] *See UNE Remand Order*, ¶ 13 ("Because competitors do not yet enjoy the same economies of scale, scope and ubiquity as the incumbent, they may be impaired if they do not have access, at least initially, to certain network elements supplied by the incumbent LEC.").

Covad has built its business, the Commission's abrupt about-face will unfairly compromise those few remaining upstart competitors that have relied on access to UNEs to provide consumers with innovative, competitively-priced broadband services. Simply put, any Commission decision to ignore the clear mandate of Congress and scale back unbundling of the ILECs' loop and transport facilities would effectively eliminate broadband choice for consumers and small/medium sized businesses. Over the last six years, Covad has built a nationwide broadband network from the ground up and has relied extensively upon the Commission's UNE rules in selecting the architecture for that network.

Should the Commission alter the availability of UNE loops and line sharing, transport, or OSS, Covad's ability to provide broadband service to consumers will be seriously disrupted and Covad may be forced to re-design its entire network, including (1) obtaining collocation, interoffice transport and loops from third party sources that may or may not exist; (2) ordering, testing, accepting, monitoring, and performing repair and maintenance functions for such network elements and related services, replicating in its own workforce the thousands of ILEC technicians nationwide who have maintained the monopoly loop and transport facilities for a century; and (3) obtaining capital to fund the construction of a parallel network to that of the ILECs at a time when the capital markets are closed to even marginal new investment, not to mention the kind of funding necessary to build another local network from scratch. If the Commission reduces in any way Covad's ability to obtain loops of all kinds, dedicated transport (including DS-1s, DS-3, and OC-x) or access to OSS, Covad's ability to compete will be thoroughly impaired. In short, as set out in greater detail below, it has never been, nor will it ever be,

either economically or technically feasible for any company to replicate the nationwide loop and transport architecture built up by the monopoly incumbent telephone companies over the last century. Given a very hostile capital market, the Commission must be wary of ILECs cries for "deregulation" of their bottleneck facilities.

CURRENT STATE OF THE TELECOMMUNICATIONS MARKET IN THE UNITED STATES

Competition Has Driven Down the Price of Bandwidth, and Consumers are Benefiting From the Widespread Availability of Competitive Broadband Offerings.

Covad has been a moving force in prompting the ILECs collectively to deploy their own consumer ADSL services in approximately 3200 central offices within their respective regions, thereby reducing the price of bandwidth to consumers and businesses across the nation. For example, in significant part because of Covad and the Commission's line sharing rules, Qwest has cut the price of bandwidth from approximately $180 per month for ISDN (operating at 128 Kbps) to less than $50 per month for 640 kbps downstream ADSL service (which also includes Internet access services). The other ILECs have followed suit.[15] Consumer Internet service providers ("ISPs"), such as Earthlink, and their mostly residential end users have benefited greatly from this UNE-based competition, as such ISPs have a choice of innovative broadband inputs.

Similarly, Covad provides T-1 services that the ILECs generally offer throughout the country at prices that are out of reach for the vast majority of consumers and small

[15] Verizon recently warned that, because of competition, it would have to lower its prices considerably and likely take losses as a result. *See Verizon Capital Spending to Shrink*, Washington Post (March 21, 2002), available at http://www.washtech.com/news/telecom/15780-1.html ("Verizon also noted that as a result of competition, the company may see further market pressures to cut service prices,

business customers. Because the Commission has consistently unbundled all loop facilities, including loops capable of supporting high bandwidth services, Covad and its affiliates are providing full T-1 service and fractional T-1 service (in addition to ISP services) to home office workers and small businesses at approximately a third less than the price that ILECs charge for equivalent services. Covad could not bring this kind of innovation to previously unserved market segments at competitive prices without access to UNEs.

The benefits of competition to consumers and small businesses are clear: lower prices and more innovative service offerings. The ILECs do not like such competitive offerings, and their advocacy at the Commission reveals that truth most starkly. For example, in 2001, Covad launched of a suite of business-class broadband services, designed specifically to meet the needs of small and medium-sized businesses that had been all but ignored by the ILECs. Also in 2001, the Bell companies filed a petition with the Commission, asking the Commission to carve out an exception to its loop unbundling rules to deny Covad access to so-called "high-capacity loops"– in other words, loops used to provide high-bandwidth services to businesses. In 2001, Covad began serving 100% of its residential customers over line sharing UNEs, offering consumers a competitively priced, technically superior ADSL product in a timely manner. Also in 2001, the Bell companies asked the D.C. Circuit to overturn the Commission's line sharing rules and eliminate competitive DSL residential offerings. Covad offers its customers a choice of some 150 different ISPs; the Bell companies are asking the Commission to eliminate the obligation that they provide their own customers with the same choice of ISPs. Not long

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restructure service packages or respond to short-term situations with special introductory pricing or packages to new providers launching services in particular markets.").

before, the Bells raised their consumer DSL rates by 25%. In six short years, Covad built a nationwide network that reaches nearly 45% of the country; despite mega-mergers and promises of competition, no Bell company has materially expanded its network beyond its legacy monopoly territory in order to provide consumers more competitive choices. The RBOCs would rather pay penalties than fulfill their merger commitments to compete out of region. In short, the Commission should ask a simple question: are consumers best served by the Bell companies' regulatory agenda?

Consumers are adopting broadband services at an explosive rate – and the Commission's unbundling rules are making it happen. The Commission undertakes this third inquiry into its UNE rules at a time of incredible growth in broadband deployment. According to the Commission's own recent findings, "investment in infrastructure for advanced telecommunications remains strong." [16] Specifically, in its most recent Report to Congress pursuant to section 706 of the 1996 Act, released just weeks ago, the Commission concluded that broadband services were being deployed in a " reasonable and timely basis." That finding, based on the panoply of broadband retail services available to consumers, suggests strongly that the Commission's broadband policy to date has been an overwhelming success. The cornerstone of that policy – the availability of competitive broadband offerings – is the Commission's implementation of congressionally mandated unbundling of ILEC networks.

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[16] *See FCC Releases Report On The Availability Of High-Speed And Advanced Telecommunications Capability: Report on High-Speed and Advanced Telecommunications Services Shows Nearly Ten Million*

Perhaps most interestingly, the Commission found (based on carriers' own data submitted to the Commission) that the incumbent phone companies controlled a whopping *93%* of DSL lines in service. It is inconceivable that the Commission could give any credence to Bell company arguments that they are handicapped by existing unbundling regulations in their ability to capitalize on the exploding DSL demand. ILECs will focus in this proceeding on their favorite red herring argument, advanced in recent months in support of H.R. 1542 (the Tauzin/Dingell bill), that unbundling rules deter investment and deployment of broadband services. The facts – not only the Commission's conclusions regarding the reasonable and timely nature of broadband deployment, but the ILECs' own statistics regarding the explosion of their retail DSL offerings – belie that contention.[17] Indeed, the Commission need only look at recent deployment statistics for Bell company DSL services to see what truly sparks DSL

Subscribers, News Release (February 7, 2002), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-219820A1.pdf.

deployment. Only competition could force these monopolists to take a technology that existed on their shelves, but not in the marketplace, for over a decade and deploy it for the benefit of consumers. Covad was the first to deploy DSL commercially – to Stanford University in 1997. As the chart reproduced below demonstrates, the Bell companies were immediately sparked into action by the advent of competition, deploying broadband services at an incredible clip – increasing *one hundred fold* in just three short years. Are the incumbent phone companies handicapped by unbundling rules? Clearly not. More importantly for the purposes of this proceeding: do consumers benefit from the availability of more, rather than fewer, broadband options? The answer, undoubtedly, is yes.

The Commission's conclusions concerning the pace of broadband adoption have been echoed by the Administration in recent findings. According to the Department of Commerce's recent report, *A Nation Online: How Americans Are Expanding Their Use*

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Carrier	1998	1999	2000	2001
Verizon	N/A	N/A	540,000	1.2M
Bell Atlantic		30,000	N/A	
GTE		57,000	N/A	
Qwest	N/A	N/A	255,000	448,000
USWest		110,000	N/A	
SBC		169,000	767,000	1.3M
BellSouth		20,000	215,000	621,000
Covad		57,000	274,000	351,000
Total	**38,000**	**491,000**	**2.3 Million**	**3.9 Million**

Of The Internet,[18] 11% of the nation's population (representing 20% of the nation's Internet users) accessed the Internet via broadband connections in September 2001. That figure is up from 5% penetration in August 2000 – a 116% leap in broadband subscriptions in only *one year*. The Commerce Department also echoed the Commission's own finding that broadband geographic penetration expanded from 56% of the nation's zip codes in 1999 to 75% of the nation's zip codes by 2000. So explosive is this growth that the Department of Commerce concluded that broadband deployment far outpaced the adoption rate of most other popular communications technologies, such as color television, cell phones, pagers, and VCRs. Given the Commission's statutory obligation to promote the deployment of advanced services such as DSL, the Commission's decision process in this proceeding must start and finish with an inquiry into what unbundling rules will best promote the continued rapid deployment of broadband services.[19] It is clear that the Commission's unbundling rules, as currently constituted, have been a key ingredient in broadband deployment.

The Capital Markets Are Closed to New Telecommunications Investment

The Commission should not, and cannot responsibly, ignore the huge implications of the capital market storms that are buffeting the telecommunications sector. The era of the '80s and '90s, when high-yield bond investors fuelled the growth of numerous telecommunications start-ups (such as McCaw Cellular Communications, Teleport Communications Group and Metropolitan Fiber Systems), which were later acquired at multi-billion dollar valuations, has passed. Last year, CLECs of all shapes and sizes were variously killed, crippled or maimed by the abrupt end of an era of relatively abundant

[18] Available at http://www.ntia.doc.gov/ntiahome/dn/index.html. All statistics cited are from Chapter 4 of the Report.

capital. The battering continues this year for most CLECs. Unable to generate sufficient revenues and become profitable or raise additional capital rapidly enough, Rhythms and NorthPoint, for example, sold off their assets in Chapter 11 proceedings that quickly turned into liquidation. Such market realities must inform the Commission's policy decisions. For example, as set out in greater detail below, the Commission's analysis of unbundling the local loop and line sharing UNEs must take into account the simple fact that ILECs have deployed, over the last century, over *six million* kilometers of copper and fiber loop plant.[20] It cannot be questioned that it is economically infeasible to duplicate that massive investment, particularly in the current capital-starved environment, and technically infeasible to build a comparable alternative network without making exactly the same multi-hundred-billion-dollar investments as ILECs have made in the local network.

Carriers that Sought to Build Last Mile Facilities from Scratch Usually Collapsed or Are Seriously Struggling

Over the last 6 years, the manifest difficulty any competitors that have entered into the failed experiment of attempting to build out their own facilities to bypass ILEC loops and transport has been palpable. The CLECs that chose to build out their own loops, albeit in limited geographic areas, have incurred the greatest expense, obtained the least coverage or otherwise proved the least successful. Companies with massive capital infusions and the backing of the country's savviest investors have struggled or collapsed altogether:

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[19] 47 U.S.C. § 706.

[20] *Statistics of Communications Common Carriers, Operating Statistics of Reporting Incumbent Local Exchange Carriers as of December 31, 2000*, Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division, Table 2.6, available at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/SOCC/00socc.pdf.

- RCN Corporation spent billions of dollars to build fiber-coaxial loops with a goal, upon completion of that network (which is not yet completed), of covering only about 6% of the nation's geography (the seven largest population centers in the country -- Boston, New York, Philadelphia suburbs, Washington DC, Chicago, San Francisco and Los Angeles). RCN has no announced plans to expand beyond those seven markets.

- Winstar, ART, Metricom, and Teligent cumulatively raised billions of dollars through debt and equity offerings, but went bankrupt and/or exited the market completely after trying to replicate the last mile with wireless and satellite technologies.

- GST, ICG, PSINet, XO, Metromedia Fiber Networks, and e.spire are all fiber providers focused on providing local transport network for large business customers that have experienced or could face bankruptcy.

- Also loaded with debt, Genuity has employed Internet Protocol strategies to overlay its building of infrastructure, and now appear to be facing serious questions about their viability. Indeed, Verizon CEO Ivan Seidenberg publicly expressed concerns about assuming full control over Genuity, given the massive debt load and ongoing losses that Verizon would be forced to assume.[21]

- The list of well-respected investors, in addition to the general investor community, that provided the capital to build these companies includes: Craig McCaw, Bill Gates, Paul Allen,, Forstman Little, Hicks Muse, and Verizon.

Collectively, these companies have spent many billions of dollars in making investments in broadband telecommunications infrastructure (to provide both data and voice services) without ever generating a dime of profit. Just as Covad was eyeball-to-eyeball with its own mortality last year, many of these companies have died or are staring death in the face and their current shareholders/creditors are bracing for massive losses. The Commission should study these failed efforts to duplicate Bell last mile and interoffice transport capabilities and should reach two conclusions. First, the mere existence of a company that has attempted to duplicate such network facilities is no

[21] *See Concerns Mount over Genuity's Relationship with Verizon*, Dow Jones Business Wire (March 15, 2002), available at http://biz.yahoo.com/djus/020315/200203151528000550_1.html.

evidence that the bottleneck facilities need no longer be unbundled, because such competitive efforts are most likely either outright failures or on the brink of collapse. Second, if the Commission scales back the availability of unbundled last mile and interoffice transport capabilities, it would strand competitors that rely on these facilities, because of the absolute lack of competitive alternatives, either now or in the near future. It is certainly possible at some point in time that alternative networks will be built, but it would be foolish to count on that eventuality given the current investor disillusionment with massive telecommunications losses.

If UNE Rules are So Favorable to CLECs, Why Aren't the ILECs Competing Out of Region?

In the last year, many UNE-based CLECs did not emerge from bankruptcy, including NorthPoint, Rhythms, Vitts, Prism, and Jato. Given the failure of these carriers, ILEC arguments that the UNE rules are unduly favorable to CLECs are weak. Indeed, if the Commission's UNE rules were as pro-CLEC as the ILECs contend, they should have exploited the "CLEC opportunity" to compete out-of-region by now. Instead, there has been little such out-of-region competition between the ILECs. Rather, the incumbents have spent the preponderance of the last 6 years merging with each other and applying for Section 271 approvals at state commissions and this Commission.[22] While SBC invested modest amounts in NAS and Covad, and purported to do the very minimum required by its Ameritech merger commitments to the Commission, it has not done much else.[23] Verizon hastily aborted its venture with NorthPoint Communications (and had no shame in claiming that its failed investment therein counted toward its

[22] SBC has acquired Pacific Bell/Nevada Bell, the Ameritech companies and Southern New England Telephone, and Verizon today consists of NYNEX, Bell Atlantic and GTE.

[23] SBC discontinued operations in Boston, Washington D.C. and Atlanta.

merger commitment to spend $500 million competing out-of-region).[24] The Commission should seriously question why the ILECs have failed to compete vigorously with each other out-of-region if the UNE rules are too pro-CLEC, as they contend.

Not All *of the Failed or Struggling Competitors Could Have Had Bad Business Plans*

When the 1996 Act wiped away state law prohibitions on local telecommunications competition, CLECs tried every avenue to compete with ILECs. Titans like Craig McCaw (Teledesic and XO), Bill Gates (Teledesic), Paul Allen (Metricom, RCN, Charter Cable), and Jim Crowe (Level 3), and seasoned telecommunications investors such as Peter Keiwit (Level 3), Forstmann Little (McCleod and XO), Hicks Muse (Rhythms) invested (and lost) billions of dollars. They tried various strategies – including building their own facilities, using UNEs, reselling ILEC retail services and/or some combination of the foregoing – and employed myriad technologies – ranging from satellite (Teledesic), fiber-coaxial cable (RCN), fiber (XO), fiber with IP overlay (Level 3), and DSL (Rhythms) – with abysmal results.

The key lesson the Commission must draw from the sad state of CLEC affairs is not that the CLEC industry has been universally financed or managed by bad investors and businessmen executing bad business plans, but rather that the fixed cost of building out telecommunications networks, especially local telecommunications networks, remains gargantuan. It is not only very expensive to build out, operate and manage a telecommunications network – even if UNE-based – but it is difficult to compete in local telecommunications markets because:

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[24] *See* letter of Gordon R. Evans, Vice President -- Federal Regulatory, Verizon Communications, to Carol Mattey, Deputy Chief, Common Carrier Bureau, CC Docket No. 98-184, ASD File No. 0030 (filed

- The ILECs are obstructionist, non-cooperative monopolists intent on unlawfully maintaining their choke-hold on the country's telecommunications markets;

- The ILECs each have their own different OSS, methods of operation, and procedures and processes that complicate CLEC interactions with them;

- In order to succeed, CLECs must develop economies of scale, which poses management challenges in a variety of forms across tens of states. These challenges concern diverse business management issues such as hardware and other procurement, IT systems, inventory control, logistics management, ILEC management, fleet management, financial controls, labor law compliance, securities law compliance, etc.

In the light of the difficulties that CLECs are experiencing, combined with the ILECs' collective failure to compete out-of-region, the Commission should be extremely cautious about eliminating any of the current unbundling obligations. The Commission should also avoid creating any uncertainty and doubt in its UNE rules, given the anti-competitive motives of the ILECs and their history of exploiting any ambiguity in the Commission's rules to harm competition. As the Commission has experienced with nearly every rulemaking proceeding it has undertaken since 1996, ILECs have the ability and the incentive to deny, delay, and degrade access to UNEs prescribed by the Commission. In crafting UNE rules in this proceeding, to the extent any changes are necessary, they must be changes in the level of specificity of the rules – the Commission must precisely detail the parameters of UNE unbundling so as to leave no room for the incumbents to apply anti-competitive interpretations to the rules.

Debt is a Major Burden for Even the Largest Telecommunications Carriers – Blame for Poor ILEC Balance Sheets Lies with the ILECs Themselves, not Pro-competitive Regulatory Policies

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March 7, 2002).The Commission should also note Verizon's lack of competition in markets at the edge of its acquired GTE footprint in very attractive markets in Florida, Texas and California.

ILECs are pursuing a unified course of advocacy in this and related regulatory and legislative proceedings: they are attempting to stifle competitive entry by seeking the reduction of pro-competitive public policies that make such entry possible. In recent months, ILECs have shifted direction in their advocacy and claim now not only that CLEC financial ruin is the CLECs' own fault, but the precarious state of the ILECs' own balance sheets is the CLECs' fault as well. That is, the difficult financial position in which the ILECs find themselves – declining lines in service, massive layoffs, huge debt burdens, and lack of capital – is somehow caused by UNE unbundling. Such an argument is ridiculous, but the ILECs have met with success in less-informed arenas with selling that message. Moreover, the Bell companies seem to have convinced themselves that the regulatory process is somehow to blame for their financial woes – SBC defaults to blaming the FCC and state regulators when the BOC cancels or cuts back a capital expenditure, such as Project Pronto. Now the Bell companies ask for regulatory favoritism in order to prop up their sagging balance sheets. In truth, however, regulatory policies that implement the 1996 Act by requiring unbundling of the ILEC networks are not responsible for the financial state of the ILECs.

Today, no telecommunications carrier, including the largest IXCs and ILECs, should pretend to be immune from the ill effects of excessive debt that have plagued CLECs. It does not help that the economy is weak and there is tremendous over-capacity of facilities compared to profits and return on investment. Competition is increasing and profit margins are declining in all telecommunications sectors, including the long distance, wireless, broadband, dial-up, and second phone line segments. The ILECs have each taken on their own mountains of debt in order to fund various imprudent

investments and expenses (where current returns are less than expected, declining or non-existent) such as:

- wireless investments (e.g., Cingular, Verizon Wireless etc.)
- investments in PTTs and other ventures overseas;[25]
- broadband investments (e.g., cable modem experiments of Pacific Bell in San Jose, BellSouth's cable TV experiment in Chamblee, GA, ILEC wireless broadband experiments, and Verizon's video dialtone experiments);
- investments in their own ISP affiliates (e.g., Verizon Online and SBC-Prodigy);
- investments in long distance companies (e.g., U S West-Qwest);
- investments in CLECs (Verizon-Metromedia Fiber Networks) and their own efforts to become CLECs (e.g., Qwest); and
- expenses to purchase political influence, legal and lobbying services at the state and federal regulatory commissions, legislatures and courts.

Today, there are few creditors willing to provide capital and billions of dollars of debt hangs like a noose around the necks of even the largest telecommunications carriers:[26]

Data as of December 31, 2001	VZ	Q	SBC	BLS	T	FON	WCOM	COVD
(in $ Millions)								
Annualized Q4 Revenue	68,044	18,816	47,612	30,548	50,344	26,624	21,204	352
Total Debt	64,326	24,901	26,166	20,210	57,079	20,902	24,705	50
Debt to Annualized Revenue	94.5%	132.3%	55.0%	66.2%	113.4%	78.5%	116.5%	14.2%

Just how serious is the ILEC mountain of debt? Very serious. Companies such as Qwest have seen its stock trade at below $10 per share for a sustained period of time.

[25] *See, e.g., BellSouth: Difficulty in Latin America will make for a weak first quarter*, Telecom Services: Wireline Note, Goldman Sachs (April 5, 2002) (reporting BellSouth charge of over $200 million against Latin American losses).

Indeed, Qwest is wrangling with its creditors, is under SEC investigation, and is engaging in corporate transactions in order to meet its debt covenants.[27] Qwest and Verizon have sold off or are attempting to sell off assets such as rural exchanges to which Covad has unbundling rights. Even Verizon's debt rating has come under fire.[28]

Making a dent in their debt, for example by selling off assets (for which there is a general paucity of buyers)[29] has become Job Number One for these companies. Telecommunications carriers and cable companies are paying billions of dollars annually to service their debt, greatly sapping their earnings per share.[30] All of these companies are seeing increased competition, lower margins, less growth or negative growth in their core businesses and, therefore, as Job Number Two, they are cutting capital and other expenses.[31] And, like Covad, they have made Job Number Three the goal of filling up their existing networks with customers to generate revenue growth and maximize profits. Whereas Wall Street once valued telecommunications companies based upon their

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[26] Covad presents additional information in Appendix C (attached hereto as an Excel file) regarding the ILECs' debt burdens as well as those of cable companies. That additional information suggests that cable companies also will not be replicating the ILECs' local networks in the future.

[27] *See* Christopher Stern, *Short-Term Lenders Cut Off Qwest's Cash,* Washington Post (February 15, 2002), available at http://www.washtech.com/news/telecom/15194-1.html*; Qwest Amends $4 Billion Unsecured Bank Credit Facility*, Dow Jones (March 18, 2002), available at http://biz.yahoo.com/djus/020318/200203180743000231_1.html.

[28] *See Verizon to Cut Debt; Sees S&P Revising Outlook*, Reuters (March 22, 2002), available at http://biz.yahoo.com/rf/020322/n2283706_1.html ("S&P revised its outlook on Verizon to 'negative' from 'stable,' citing the company's higher-than-expected debt leverage, and its less-than-expected cash-flow growth. Rating agencies Moody's Investors Services, which also has a 'negative' outlook on the company, and Fitch Ratings, which has a 'stable' outlook, reaffirmed their views.").

[29] *See, e.g.*, *Qwest Says It Could Default If Costs Are Not Cut*, Reuters (March 4, 2002), available at http://biz.yahoo.com/rf/020304/n04340192_1.html ("The Denver-based voice and data services company said late last week it could be in default by the end of the second quarter, but Qwest said it has been cutting costs, issuing equity-based securities and selling assets.").

[30] Even the ILECs, such as Qwest, are beginning to face questions from their creditors. *See Moody's Cuts Qwest, May Cut Again to "Junk" Status*, Reuters (March 5, 2002), available at http://biz.yahoo.com/rf/020305/n05160338_1.html.

[31] *See, e.g., Verizon Capital Spending to Shrink, supra; Verizon to Cut Debt; Sees S&P Revising Outlook*, Reuters (March 22, 2002), available at http://biz.yahoo.com/rf/020322/n2283706_1.html ("S&P revised its outlook on Verizon to 'negative' from 'stable,' citing the company's higher-than-expected debt leverage, and its less-than-expected cash-flow growth. Rating agencies Moody's Investors Services, which

potential for capturing market share, it now looks only at the bottom line: profit is the *only* metric that matters anymore. The Bells are facing their own financial crises, but unlike Covad, they refuse to engage in self-help, but choose instead to blame the government and to seek an end to competition.

Broadband Profits and Competition Will Generate Broadband Investment

The lessons of the market are unequivocal: carriers will invest in broadband facilities when they can make money doing it and they are threatened with losing market share if they stand on the sidelines. Making money for competitors means using unbundled network elements (combined with their own facilities) to access end users profitably. When competitors can make money in broadband, incumbents will respond with their own investments to protect market share (as they did in responding to DSL competition by placing ADSL equipment into 3200 central offices nationwide). Without the threat of widespread broadband competition, which will not occur if competitors cannot access such unbundled network elements as loops, line sharing and interoffice transport, incumbents will cut their own investments. Indeed, the incumbents did precisely that – scaling back ambitious broadband investments such as SBC's Project Pronto as data carriers exited the market last year.

ARGUMENT

The Commission's inquiry to determine what network elements shall be unbundled starts with the text of the Act. Under Section 251(d)(2) of the Act, the Commission must consider whether "access to such network elements as are proprietary in nature is necessary" and whether "the failure to provide access to such network

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also has a 'negative' outlook on the company, and Fitch Ratings, which has a 'stable' outlook, reaffirmed their views.").

elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer."[32] For purposes of these comments, the first prong of the standard is irrelevant, because incumbent local exchange carriers ("ILECs") have not claimed that their last mile, OSS or interoffice transport networks and facilities are "proprietary."[33] The Commission's focus on these network elements will be limited to determining impairment under the second prong of the standard.

The Commission interpreted the impairment test of Section 251(d)(2)(B) in the *UNE Remand Order* as follows:

> The failure to provide access to a network element would "impair" the ability of a requesting carrier to provide the services it seeks to offer if, taking into consideration the availability of alternative elements outside the incumbent's network, including self-provisioning by a requesting carrier or acquiring an alternative from a third-party supplier, lack of access to that element materially diminishes a requesting carrier's ability to provide the services that it seeks to offer.[34]

The Commission set forth the following factors to consider in applying its definition of the impairment:

1) The costs incurred in using alternatives to the ILEC's network;

2) Delays caused by use of alternative facilities;

3) Material degradation in service quality;

4) The ability of requesting carriers to serve its customers ubiquitously using its own facilities or those acquired from third-party suppliers; and

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[32] 47 U.S.C. § 251(d)(2).

[33] To the extent the Commission does view the "necessary" prong of section 251(d)(2) relevant to the UNEs discussed by Covad in these comments, Covad supports the Commission's current interpretation of the term. *See UNE Remand Order,* ¶ 46 ("Our standard, by requiring that a requesting carrier be precluded as a practical, economic, and operational matter from providing service without access to the proprietary information, sufficiently protects the incumbents' proprietary property from nonessential access by competitors.").

[34] *UNE Remand Order*, ¶ 51.

5) The impact that self-provisioning a network element or obtaining it from a third-party supplier may have on network operations.

The Commission also set forth the following other factors to consider:

1) Whether an unbundling obligation is likely to promote the rapid introduction of competition in all markets;

2) Whether the obligation will promote facilities-based competition, investment and innovation;

3) The extent to which the FCC can reduce regulatory obligations as alternatives to the ILEC's network become available;

4) Whether the unbundling requirements will provide uniformity and predictability to new entrants and market certainty in general; and

5) Whether the unbundling obligations are administratively practical.

Covad addresses these factors in the various sections on each network element, below.

Covad also discusses congressional intent in enacting the 1996 Act. Congress has made the determination that ILEC networks are to be unbundled in a manner that supports consumer choice of competitive telecommunications services. Specifically, Congress intended there to be a service and technology neutral regulatory regime, in order to encourage innovation and service differentiation.[35] The Commission should not create distinctions that will strangle novel services and providers. Congress additionally recognized that certain key network elements, such as loops and transport, should be widely available when it made them part of Section 271's competitive checklist.[36] Congress plainly intended such unbundling requirements to assist the Commission in

[35] *See* 47 U.S.C. § 706 (defining "'advanced telecommunications capability' . . . *without regard to any transmission media or technology*, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications *using any technology*") (emphasis added).

[36] *See* 47 U.S.C. § 271(c)(2)(B)(iv) & (v).

carrying out its mandate, pursuant to section 706 of the 1996 Act, to encourage the deployment of "advanced telecommunications capability" to "all Americans."

I. ACCESS TO ILEC LOOP PLANT

The ILEC loop network – the "last mile" to *each and every* telecommunications subscriber in the United States – is a massive and ubiquitous bottleneck that CLECs flatly could not duplicate. As the sections below demonstrate, it does not matter what technology ILECs use to construct loops – the bottleneck exists for loops partially or entirely made of fiber optic cable just as much as it does for copper loops. The analysis does not change based upon the transmission protocol: loops carrying DSL, ATM, and IP signals are no easier or cheaper to replicate than loops carrying POTS. Similarly, it would be barely less feasible to duplicate high capacity DS-1 loops than it would be to duplicate voice-grade loops. For these fundamental reasons, the Commission should (1) continue to make all loops, including DSL and DS-1 loops and line sharing, available as unbundled network elements; and (2) clarify that its existing technology-neutral unbundling obligations include all mixed medium loops (*e.g.*, hybrid copper/fiber loops) that are capable of supporting DSL services.

The reach of ILEC last mile transmission facilities is ubiquitous. According to the Commission's own ARMIS reports[37], ILECs have deployed nearly *six million* kilometers of local loop copper cable, and more than 671,000 kilometers of local loop fiber optic cable. But the local loop plant is more than just metal and glass: ILECs own more than 19 million telephone poles, over which is strung two million kilometers of

[37] All ARMIS statistics cited herein are from Statistics of Communications Common Carriers, Operating Statistics of Reporting Incumbent Local Exchange Carriers as of December 31, 2000, Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division, Table 2.6, available at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/SOCC/00socc.pdf.

aerial cabling. ILECs own nearly two million kilometers worth of underground cabling in trenches and conduit. The total reported book value of ILEC telecommunications cable and wire facilities alone (not including other ILEC assets) in 2000 was over $349 billion.[38] And the real cost of placing this network includes much more than just the price of the facilities – it includes securing the rights of way, which many ILECs obtained through use of the state's eminent domain power.

These incredible statistics lead to one simple conclusion: duplication of the bottleneck local loop plant by any entity is economically infeasible because there are tremendous fixed costs associated with building local networks. Last mile transmission facilities include poles, conduits, ducts, trenches, and means of connecting such facilities to end offices. Deploying a single loop requires much more than the mere purchase of a piece of copper: it requires incredible fixed costs of trenching, stringing wire underground and along poles, purchasing rights of way for such activities, and similar expenses. Such costs are fixed because they do not vary based on the number of subscribers served – attempting to duplicate the tree and branch architecture of the local loop plants requires huge up-front investment for one loop or a thousand loops. The ILECs, which enjoyed 100% market share when they constructed their loop plant, could afford such massive fixed costs, thanks to the captive ratepayers who financed the build-out. An entity that starts with zero market share cannot undertake such multi-billion dollar projects. Indeed, what ILEC has begun to build its own loop plant outside of its monopoly territory? For these very simple reasons, Congress directed the Commission to unbundle the last mile transmission facilities of the ILECs. Indeed, local loops were so important to Congress that the Joint Explanatory Statement adopted alongside the 1996

[38] *Id*., at Table 2.7.

Act specifically lists local loops as an example of an unbundled network element.[39] In addition, Section 271 of the Act requires BOCs to offer unbundled loops as a precondition to entry into the in-region, interLATA services market.[40]

Despite these obvious facts, incumbent phone companies have mounted a public campaign against the availability of UNEs, based on two simple arguments. First, the Bells argue that cable modem providers are the "real monopoly" in broadband, and that the Bells must therefore be freed from unbundling obligations as relates to broadband services – including loop unbundling rules. Second, the Bells argue that they have no incentive to invest in "new" broadband architecture, because in the absence of a monopoly over those "new" facilities, they cannot justify the capital outlay to undertake new construction. In support of those two arguments, the Bell companies cite a "crisis" in broadband deployment, arguing that the Commission's loop unbundling rules – and those rules alone – are blocking the expansion of broadband services to more Americans.

The ILECs and their apologists confuse the issue of access to broadband with the question of take rates. Thus, for example, in a preview of Bell-friendly comments to be submitted in this docket, the so-called "High Tech Broadband Coalition" announced publicly that it was supporting the Bells' regulatory agenda because "[b]arely 10 percent of American homes and small- and medium-sized business have access to high-speed Internet connections."[41] First, this "high tech coalition" hardly reflects the unified views of the technology sector it purports to represent.[42] More importantly, as the

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[39] Joint Explanatory Statement, at 116.

[40] 47 U.S.C. § 271(c)(2)(B).

[41] *See Industry Associations Form High Tech Broadband Coalition To Advance Affordable, Ubiquitous Broadband: Group Filing Comments In FCC Review Of Unbundling Rules*, Press Release (April 3, 2002).

[42] *See, e.g., ITAA Says More Competition and Content the Path to Rapid Broadband Deployment: Association Says Challenge to 1996 Telecom Act Would Freeze Marketplace for Consumers*, Press Release,

Commission's own findings in the *Third Section 706 Report to Congress* demonstrate, this conclusion is flatly wrong – broadband *subscribership* stands at 11% nationwide, but broadband *access* is significantly higher. In fact, the Commission concluded that nearly 80% of the nation's zip codes (in which nearly 97% of the nation's population live) already have at least one high-speed broadband service provider available.[43] Even in rural areas, the Commission reported a jump in broadband availability from 20% to 37% from 1999 to 2001.[44] To the extent there has been a slowdown in infrastructure investment, the Commission has already recognized it to be caused by the "economic downturn generally and, more particularly, over-building by carriers, over-manufacturing by vendors, over-capitalization by financial markets, coupled with unrealistic market expectations by investors."[45] The Commission cannot now simply ignore the conclusions it drew only weeks ago and accept the Bell companies Tauzin/Dingell rhetoric at face value. The simple fact is that investment in broadband infrastructure is driven by competition, not by monopoly. Indeed, monopolies have no incentive to invest, but rather prefer to spend their capital on leveraging their existing networks. Directly contrary to the Bell rhetoric, the Commission noted in its latest Report to Congress that "[o]verall, analysts observe that carriers have continued to invest in this sector in a substantial way resulting in increased availability of various high-speed and advanced services platforms for consumers throughout the nation."[46]

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at 1 (April 3, 2002) ("vibrant competition rather than special accommodations for monopoly telephone companies is in the best interest of broadband users, the telecommunications industry and the U.S. economy."). ITAA is the premier high-trade association, representing over 500 technology companies from diverse segments of the sector.

43 *See Third Section 706 Report to Congress*, FCC 02-33, ¶ 28.

44 *Id.,* ¶ 36.

45 *Third Section 706 Report to Congress,* ¶ 62.

46 *Id.,* ¶ 61.

Competition is the hallmark of the Commission's broadband policy. As the Commission reported to Congress in February, "the existence of competition among providers benefits consumers by increasing the range and quality of service offerings, while reducing the price of services."[47] The Commission should view Bell claims that unbundling obligations deter infrastructure through the lens of the last six years of Bell advocacy against competition. The investment incentive argument is the latest in a long series of red herring arguments launched by the Bells against unbundling. For example, Verizon (then Bell Atlantic) in 1998 claimed that investment in its DSL networks was "fraught with risk" and would not be undertaken unless the Commission removed unbundling obligations and lifted long distance restrictions. Verizon claimed that it had a "proven track record in providing higher speed data services to residential and lower density areas [a]s evidenced by the availability of ISDN to well over 90% of its service areas."[48] ISDN, with its 128 kpbs speeds and its per-minute online charges, is hardly an example of serving the public interest, yet it is telling that Verizon thought so. Verizon also claimed that deregulation would "expand Bell Atlantic's ability to sell . . . the second or third lines that consumers often seek for their Internet services."[49] In other words, Verizon's vision of the future is continuing to sell dial-up Internet access lines – for the simple reason that BOCs make more money from second lines than they do from xDSL services.[50] Again, this advocacy offers an important insight into what motivates the Bells.

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47 *Report to Congress Pursuant to Section 706,* FCC 02-33, ¶ 150 (rel February 6, 2002).

48 *Petition of Bell Atlantic for Relief from Barriers to Deployment of Advanced Telecommunications Services*, CC Docket No. 98-11, at 15 (filed January 26, 1998).

49 *Id.,* at 16.

50 Indeed, DSL competition threatens the ILECs' core revenue – access lines – because consumers who subscribe to DSL services cancel the second or third phone lines that they had been using for dial-up or fax services. The Bell companies have all reported flat or negative line growth as a result of the

In support of their "no incentive to invest" argument, the Bells claim that they simply cannot risk investment in their loop plant unless they have a guaranteed rate of return, insulation from competition, and exclusive use of the plant. If these arguments sound familiar, it is because they are the textbook attributes of a monopoly – and this was how regulators treated the Bells from the 1876 patent of the telephone through the passage of the 1996 Act, virtually without interruption. There is little question why the Bells want a return to their monopoly control over local loops – they do not want competition from CLECs. The only important question is whether the Commission can – or should – permit a return to monopoly control.

The Commission should presume that Congress knew in 1996 that ILECs would make upgrades to their networks after the effective date of the Act.[51] Had Congress intended to draw a pre/post 1996 Act distinction in the unbundling provisions of the 1996 Act, it would have done so.[52] The fact that Congress chose not to do so provides the Commission with ample evidence of congressional intent to unbundle the ILEC loop plant regardless of changes in the material that makes up an individual loop. Indeed, Congress anticipated that ILECs would seek to chip away at unbundling requirements exactly as they have done in this proceeding and therefore specifically and explicitly barred the Commission from carving out any exceptions to section 251(c) until such time

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popularity of DSL services. Needless to say, the Bells' efforts to squelch innovative broadband services are largely motivated by their desire to recoup their dial-up access line revenue.

[51] The text of the Act demonstrates Congress's intent to make it timeless. For example, in defining what "telephone exchange service" is, Congress created a catch-all category for future technologies and facilities that offer "comparable service provided through a system of switches, transmission equipment, or other facilities (or combination thereof) by which a subscriber can originate and terminate a telecommunications service." *See* 47 U.S.C. § 153(47).

[52] *See, e.g.,* Southern Pac. Transp. Co. v. Commercial Metals Co., 102 S.Ct. 1815, 1822 (1982) ("The legislative and administrative history of the credit regulations further indicates that this silence was not inadvertent") (interpreting scope of ICC authority based on Congressional silence on issue at bar).

as that provision has been "fully implemented."[53] In addition, Congress did not provide any technical limitation on unbundling obligations, such as a carve-out for fiber loops or loops that pass through remote terminals. Given the expansive amount of fiber already deployed by 1996 in the ILEC networks, it is not surprising that Congress chose not to redline consumers served over partial-fiber loops by denying them access to competitive telecommunications services.

In sum, BOCs have been making the "cable is the real monopolist, not us" argument for years. That argument ignores two simple facts. First, the Commission's inquiry is not into whether unbundling of bottleneck ILEC facilities – transmission facilities like loops, line sharing, and transport – is proper. Congress has made that determination already. The cable network is regulated differently because it is different, and because Congress has imposed different statutory requirements on the incumbent phone companies than on incumbent cable companies. Of course, should a cable company be properly classified as comparable to an ILEC, Congress specifically empowered the Commission to treat it as such (and the BOCs are free to argue toward that end).[54] But Congress did not empower the Commission to refuse to unbundle ILEC networks simply because cable companies began offering a retail broadband service. Indeed, Congress specifically *forbade* the Commission from forbearing from section 251(c) obligations until the Commission makes an affirmative determination that all of the requirements of that section have been fully implemented.[55] Given the paucity of

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53 *See* 47 U.S.C. § 160 (providing that the Commission cannot forbear from any of the provisions of section 251(c) until that subsection of the Act has been "fully implemented").

54 *See* 47 U.S.C. § 251(h)(2).

55 *See* 47 U.S.C. § 160.

local competition, and the continuing domination of ILECs, no party to this proceeding could possibly argue that the unbundling of the ILEC networks is complete.

Given the overwhelming evidence in the statute that Congress intended the full unbundling of the ILEC loop network, the ILECs should have a heavy burden of proof in this proceeding before the Commission can be convinced otherwise. "An inference drawn from congressional silence certainly cannot be credited when it is contrary to all other textual and contextual evidence of congressional intent."[56] The overwhelming evidence of statutory intent clearly requires unbundling of all loop facilities, not just those made of copper. In particular, Congress's failure to include in the statute a carve out for "new materials" that the incumbents are now pressing on the Commission is clear congressional intent, given the statutory mandate to unbundle monopoly facilities and the limit on 251(c) forbearance authority, to deny the Commission authority to grant the incumbents' wish.

A. DSL Loops & Line Sharing

1. Background

Loops are the " transmission facility between a distribution frame (or its equivalent) in an incumbent LEC central office and the loop demarcation point at an end-user customer premises, including inside wire owned by the incumbent LEC."[57] Loops compatible with DSL signals ("DSL loops") are no different than the copper loops over which ILECs offer POTS and other voice services to end users, except that they do not contain load coils or excessive bridged tap.[58] The "high frequency portion of the

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[56] *Burns v. U.S.*, 501 U.S. 129, 136 (1991).

[57] 47 C.F.R. § 51.319(a)(1).

[58] A load coil is "an induction device employed in local loops exceeding 18,000 feet in length, that compensates for wire capacitance and boosts voice grade frequencies." *See* Newton's Telecom Dictionary,

loop" refers to the high frequency spectrum that travels over loops that ILECs use to provide local telephone service to end users (hereinafter generally "line sharing").[59] DSL providers offer asymmetric DSL ("ADSL") via line sharing over the same loop as consumers use to receive voice services from the ILEC.

2. Argument

Covad urges the Commission to maintain its current unbundling requirements for loops and line sharing, including the technical neutrality of the Commission's loop unbundling rules. Congress was clear in its direction to the Commission to unbundle last mile connectivity, and the Commission has properly implemented that congressional mandate by requiring ILECs to make loop and line sharing UNEs available to requesting carriers. The Commission must again assert the importance of last mile transmission unbundling. In particular, the Commission must re-affirm that loops compatible with DSL signals ("DSL loops") and the high frequency portion of loops (on which the ILEC provides retail voice services) are network elements that must be unbundled under the Act. It would be an understatement to say that, without access to ILEC loop plant, Covad would be impaired in seeking to offer DSL services either on stand-alone loops or via line sharing. Covad can readily satisfy each and every one of the relevant factors.

There are no alternatives to the ILEC's copper loop plant, which CLECs use to offer both stand-alone and line shared DSL services.[60] While some CLECs have deployed limited fiber transport networks, no CLEC to Covad's knowledge has deployed

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at 420 (14th Ed. 1998). Load coils distort data services on loops. *Id*. "A bridged tap is multiple appearances of the same cable pair at several distribution points. A bridged tap is any section of a cable pair not on the direct electrical path between the central office and the user's offices. A bridged tap increases the electrical loss on the pair – because a signal traveling down the pair will split its signal between the bridge and main pairs." *See id*., at 108.

[59] *See* 47 C.F.R. § 51.319(h)(1).

[60] Covad discusses access to fiber-fed loops in section I.C, below.

a loop network compatible with DSL services to any degree, much less ubiquitously. As the Joint Declaration[61] explains, cable, wireless, satellite, and competitive fiber facilities are not capable of providing service comparable to DSL in either quality or ubiquity.[62] In particular, cable plant is deficient because, even if CLECs could access it (which they cannot do under the law), broadband services offered thereon are not dedicated to the customer, lack the security of dedicated DSL facilities, and are rarely, if ever, available to business customers.[63] Moreover, CLECs, including Covad, have not constructed such redundant bottleneck facilities because the cost of doing so would be an unthinkable multi-hundred billion dollar undertaking. Consequently, in applying the impairment test to stand-alone loops and line sharing, the Commission must conclude that:

1) There is no point in attempting to calculate the "costs incurred in using alternatives to the ILEC's [loop] network" because there are no such alternatives for either stand-alone loops or line sharing. There is simply no communications platform available to Covad (or any other telecommunications carrier) that ubiquitously reaches end users.

2) The "delays caused by use of alternative facilities" are not at issue because there are no such alternative facilities. The only conceivable delay that the Commission could consider would be the delay in awaiting the construction of a nationwide, ubiquitous last mile network that duplicates in its entirety the existing ILEC networks. Such a delay would be infinitely long, because no such network will ever be constructed, which is exactly why Congress required unbundling of bottleneck facilities in the first instance.

3) There would be more than just a "material degradation in service quality" if Covad could not use ILEC loop plant – Covad would not be able to offer DSL service at all (either in stand-alone or line shared form) because there are no alternatives to the ILEC network.

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61 *See* Joint Declaration of Anjali Joshi, Eric Moyer, Mark Richman, and Michael Zulevic on Behalf of Covad Communications Company (attached hereto) ("Joint Declaration").

62 *See* Joint Declaration, ¶¶ 13-27.

63 *See* i*d.*, ¶¶ 14, 15, 17.

4) Covad does not have the "ability" to "serve its customers ubiquitously using its own facilities or those acquired from third-party suppliers" because neither it nor any third-party carrier could conceivably replicate the ILECs' loop plant.

5) If Covad were forced to self-provision the ILEC's loop plant or obtain it from a third-party supplier the "impact" on Covad's "network operations" would be devastating because (as stated above) self-provisioning and third-party suppliers simply could not replace the ILECs' ubiquitous loop plant.

Applying the Commission's other factors to ILEC loop plant similarly supports unconditionally declaring loops and line sharing to be unbundled network elements. First, unbundling loops and line sharing "is likely to promote the rapid introduction of competition in all markets" because, in addition to data applications, they can support voice services riding on the DSL signal. As set out in greater detail above, Covad and other CLECs have historically provided, and continue to provide, a vital competitive incentive for ILEC broadband deployment. In addition, the availability of voice-over-DSL ("VoDSL") services would enhance competition in the voice market, especially because the technology effectively increases the number of telephone lines available to end users (and thus competitors).[64] Moreover, allowing CLECs to buy loops and line sharing will enhance competition in the Internet services market because DSL carriers can compete as ISPs (which Covad does through its Covad.net affiliate), and offer competitive broadband inputs to nonaffiliated ISPs as well.

Second, unbundling loops and line sharing "will promote facilities-based competition, investment and innovation." Covad, by itself, raised nearly two billion dollars and has DSL facilities deployed in over 1700 central offices across the country (a footprint it plans to expand to 1800 offices in the near term). Covad would not, and

could not, have made those investments in the absence of the ILECs' unbundling obligations. Covad is a prototypical facilities-based competitor because it deploys its own equipment that is critical to offering service (notwithstanding its use of ILEC transmission facilities). In doing so, Covad meets the "innovation" prong of the factor because it is able to create and control new and previously unavailable services.[65] Such innovation and investment will continue, but only if Covad can continue to purchase UNE loops and line sharing in order to access its end user customers.

Third, unbundling loops and line sharing undoubtedly will "provide uniformity and predictability to new entrants and market certainty in general." Over the last five years, the Commission's unbundling requirements for loops succeeded in clearing a path to the development of a competitive data provider industry that attracted massive sums of capital. The Commission's decision to unbundle the high frequency portion of the loop further reinforced the right of CLECs to compete with ILECs on an even footing. While it is true that the market has recently wiped out a number of competitors, the Commission's unbundling rules had no part in that result. There is every reason to believe that re-affirming ILECs' obligations to unbundle loops and line sharing will continue to promote uniformity, predictability and market certainty.

3. Line Sharing Specific Impairment Arguments

The Commission must also preserve its rules requiring the unbundling of the line sharing UNE. As demonstrated above, the same impairment analysis for unbundled standalone loops applies equally to the line sharing UNE – CLECs would be impaired in

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[64] On a typical symmetric DSL line operating at 1.1 Mbps, Covad can offer up to 16 voice lines. See id., ¶ 18 n. 8.

[65] *See* Covad's answer (in section III, below) to the Commission's question in paragraph 25 of the NPRM regarding investment-driven innovation over the last five years.

seeking to offer voice-compatible broadband services if denied access to the upper frequencies of the loop. The Commission also should reject ILEC attempts to resurrect arguments made in the Commission's 1999 consideration of line sharing that CLECs can lease an entire, separate unbundled loop in place of line sharing. The Commission previously found that CLECs would be impaired in offering ADSL to consumers and small businesses in the absence of line sharing. Nothing has changed since that time. It would be arbitrary and capricious for the Commission to flip flop line sharing policy without real proof that the three bases for its line sharing decision have changed. Covad currently serves over 350,000 customers nationwide, over half of which are residential customers. Since January 2001, Covad has provisioned its residential services almost exclusively over line sharing UNEs. The Commission's dedication to its line sharing UNE rules is providing tens of thousands of broadband customers with competitive DSL service offerings, and hundreds more consumers are signing up every day. The Commission should not deny existing and future CLEC broadband customers access to the broadband services that CLECs would, as the Commission has already concluded, be unable to provide without line sharing UNEs.

First, the Commission previously concluded that many customer premises will not have a free stand-alone loop to dedicate to ADSL service, because either there are few loop facilities traveling between the premises and the serving central office or the customer may have all of its loops already in service as multiple voice or fax lines.[66] This lack of loop facilities still exists for many consumers today. Indeed, consumers who

[66] *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Third Report and Order in CC Docket No. 98-147 Fourth Report and Order in CC Docket No. 96-98, FCC 99-355, at ¶ 38 (rel. December 9, 1999) ("Line Sharing Order").

in 1999 had only a single loop available to them are unlikely to have newly constructed loop facilities available to them today.

Second, the Commission concluded that the cost to CLECs of having to lease a stand-alone loop would be "not just marginally more expensive, but so prohibitively expensive that competitive LECs will not be able to provide such services on a sustained economic basis."[67] And the Commission was right. Although Covad, NorthPoint and Rhythms each offered ADSL to consumers over stand-alone loops prior to the Line Sharing Order, NorthPoint and Rhythms later went out of business (before they could take advantage of line sharing to any meaningful degree) and Covad nearly followed suit. Nothing has occurred since the Commission issued the *Line Sharing Order* to alleviate the cost disadvantage[68] associated with having to lease a stand-alone loop to offer ADSL service. Indeed, since 1999 the ILECs have fully embraced line sharing in their own retail offerings, further ensuring an anticompetitive price squeeze were such line sharing capabilities denied to competitive LECs.

Third, the Commission found that, in the absence of line sharing, ILECs would have a unique competitive advantage: "[t]he incumbent is able to market its own [line sharing] service to customers as a quick and convenient add-on service, while the competitive carrier must persuade the customer to purchase a second line."[69] CLEC customers would have to arrange for a technician to install the service (resulting in the CLEC bearing substantial additional costs),[70] while ILEC customers would be able to

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67 *Id.*, ¶ 39.

68 *See id.*, ¶ 41 ("The record indicates that incumbent LECs generally allocate virtually all loop costs to their voice services, then deploy a voice- compatible xDSL service such as ADSL on the same loop, allocating little or no incremental loop costs to the new resulting service.").

69 *See id.*, ¶ 42.

70 *See* Joint Declaration, ¶ 11.

install the service themselves.[71] Nothing has changed either to eliminate the convenience of installing ADSL on the customer's voice loop or to mitigate the massive inconvenience and huge cost and operational disadvantages associated with installing a stand-alone loop for the customer. Indeed, the success of both Covad and the ILECs in deploying line shared ADSL services to residential consumers at an explosive rate is a testament to the operational advantages of line sharing.

The Commission also addressed the argument that CLECs should lease entire loops and provide customers voice services to make it economical to provide ADSL on the high frequency portion of such loops. The Commission rejected that ILEC argument, and concluded that data CLECs could not be expected to deploy circuit switches, given the extraordinary cost and operational difficulty of doing so. The Commission further found that CLECs could not be expected to offer voice services using the ILEC's unbundled local switching, because of various operational challenges.[72] The Commission stated that it would not force CLECs to deploy both voice and data over the same lines by "regulatory fiat."[73] Rather, the Commission stated that it would rely upon the market to incent carriers to become integrated voice and data providers: "[t]o conclude otherwise would be to ignore the statutory directive in section 251(d)(2) that requires the Commission to consider whether a requesting carrier is impaired 'to provide the services

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71 *See Line Sharing Order*, ¶ 42; Joint Declaration, ¶ 11.

72 *Line Sharing Order*, ¶ 48 ("In particular, a competitive carrier would need to develop marketing, billing, and customer care infrastructure designed to service the needs of its voice customers. In addition, competitive LECs seeking to enter the traditional voice services market must deploy sales and marketing forces, and invest in creating a recognizable brand. To compete against incumbent LECs that have a long history providing voice services, competitors must overcome the substantial goodwill, experience and market power of the incumbent LECs.").

73 *Line Sharing Order*, ¶ 49.

that it seeks to offer.'"[74] Nothing has changed since the Commission made these findings, and there is accordingly no reason for it to depart from these rulings.[75]

Lastly, the Commission addressed the notion that requesting carriers could line share over facilities other than the ILEC's loop plant. The Commission ruled that obtaining the high frequency portion of the loop from third-party sources was not an option for requesting carriers, for such alternative facilities simply did not exist. The situation has not changed, as the previous section as well as the Joint Declaration make clear in showing that there are no real alternatives to the ILECs' loop plant.

In sum, the rationales underlying the Line Sharing Order hold with equal force today, and the Commission should maintain line sharing as an unbundled network element. There has been no significant change in circumstances since the Commission adopted the line sharing order.

4. Responses to Specific Commission Questions

The Commission asks whether it should apply "service, geographic, capacity or other distinctions to the unbundled loop."[76] It absolutely should not do so for loops or line sharing UNEs, which are, obviously, unbundled on a customer-specific basis. Unlike a switch, which can service hundreds of thousands of end users, a local loop can only serve the customer to which it is connected. It is impossible for the Commission to devise a system whereby a CLEC, in order to obtain a loop for an individual subscriber, would first have to prove to the ILEC that there is no alternative transmission pathway to

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74 *Id*.

75 Because nothing has changed to merit reevaluation of the Commission's line sharing rules, Covad incorporates by reference its pleadings submitted to the Commission in CC Docket No. 98-147, the line sharing docket. Covad will provide additional information to the Commission as needed to respond to any questions regarding line sharing.

76 NPRM, ¶ 51.

that customer. Such a customer-by-customer system would be unworkable – no customer would await the outcome of such a regulatory process and would instead simply sign up with the ILEC.

Even if the Commission thought such a burdensome analysis was feasible, it would be pointless to make CLECs go through the exercise because alternatives to the ILEC loop plant are simply not available to CLECs today. For example, given the answers to the five factors above, CLECs are not even close to being able to offer the DSL services they wish without unbundled loops or line sharing. The existence of retail cable modem and satellite broadband services is irrelevant to the Commission's statutory inquiry into unbundling of the local loop – no CLEC has access to cable or satellite transmission capabilities, and even if they did, such transmission pathways are not capable of supporting DSL, the service Covad seeks to provide.[77] Any ruling to the contrary needlessly would deny end users access to competitive broadband services.

The Commission asks whether it should apply technology neutral rules to loop unbundling[78] and, on a related note, whether it should distinguish between packet-switched and circuit-switched services that CLECs intend to provide over loops.[79] The Commission definitely should apply technology neutral unbundling rules and, accordingly, should not attempt to distinguish between packet-switched and circuit-

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[77] It is certainly no answer that Covad could simply become a cable or satellite company, because the costs of deploying a cable system or a satellite could be as expensive as building a parallel duplicate local loop network. More importantly, requiring a CLEC to build its own parallel network would completely nullify Congress's determination that ILEC networks must be unbundled.

[78] NPRM, ¶ 50.

[79] NPRM, ¶ 51*; see* Covad's response (at page 87 below) to a similar question in paragraph 51 of the NPRM.

switched services.[80] As the Commission has repeatedly recognized, last mile transmission capability is a bottleneck facility. The existence of that bottleneck remains the core of the Commission's unbundling analysis, because without access to last mile connectivity to the end user, CLECs are impaired in their ability to offer the telecommunications services they seek to provide. That impairment has nothing to do with the service protocol offered over the last mile facility – it exists because the facility itself is a bottleneck monopoly facility. Thus, the Commission is not unbundling a service protocol – it is unbundling a transmission pathway. By consistently defining local loop transmission without reference to service protocol or speed, except to make clear that such loops must support *any* speed they are technically capable of supporting (with or without conditioning), the Commission has adopted a proper, technology neutral approach to loop unbundling. Consistent with its long-standing policy,[81] the Commission should not pick technology winners and losers by stifling local loop innovation. ILECs have an obvious incentive to bar their competitors from offering innovative telecommunications products that the incumbents themselves do not offer. The Commission's statutory mandate, on the other hand, is to ensure that consumers have access to the widest possible variety of technologically innovative advanced services. It was this mandate that led the Commission in 1996 to require ILECs to unbundle all

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[80] Indeed, the Commission's prior efforts to limit the unbundling of packet switch devices by linking such unbundling to the local loop architecture, as with remote terminal-fed loops, has given ILECs abundant ammunition to flout the Commission's otherwise clear loop unbundling rules.

[81] *See Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, First Report and Order, CC Docket No. 96-98, FCC 96-325, ¶ 12 (rel. August 8, 1996) ("*Local Competition Order*") ("Section 251 neither explicitly nor implicitly expresses a preference for one particular entry strategy. Moreover, given the likelihood that entrants will combine or alter entry strategies over time, an attempt to indicate such a preference in our section 251 rules may have unintended and undesirable results. Rather, our obligation in this proceeding is to establish rules that will ensure that all pro-competitive entry strategies may be explored. *As to success or failure, we look to the market, not to regulation, for the answer*.") (emphasis added).

loops, including "two-wire and four-wire analog voice-grade loops, and two-wire and four-wire loops that are conditioned to transmit the digital signals needed to provide services such as ISDN, ADSL, HDSL, and DS1-level signals."[82] These technology-neutral loop unbundling rules led to the kind of innovation that the Commission predicted would be the result. The Commission should continue to lay down and enforce technology neutral ground rules, and let the market decide which business plans are worth pursuing.

All local loops and line sharing UNEs must be unbundled, regardless of service protocol or bandwidth, regardless of the material the loop is made of, and regardless of what the ILEC is or is not doing with the transmission facility. To that end, the Commission should clearly define its local loop and line sharing rules in this proceeding, as it has done in the past, in order to hedge against ILEC mischief. In particular, the Commission must make clear that the loop includes not only the transmission facility itself, regardless of the material (fiber, copper, coaxial cable, etc.) but also any attached electronics, such as T-1 "smart jacks," that the ILEC maintains as part of its loop plant. In addition, the Commission must make clear that ILECs cannot refuse to provide a loop or line sharing UNE for any reason except one: the UNE does not exist because there is no transmission facility anywhere that could link the end user's premises to the serving wire center. Short of that, ILECs must make all facilities that exist in their networks available to requesting carriers.

B. High-Capacity Loops

1. Background

[82] *Local Competition Order,* ¶ 380.

The Commission has never imposed a technical limitation related to bandwidth or capacity as part of its loop unbundling rules. Rather, the Commission has made consistently clear over the last six years that loop unbundling requires the provisioning of a transmission pathway, rather than a specific speed of transmission. Such technology-neutral unbundling rules have led to incredible innovation – most notably, the deployment of high-speed broadband services over loops that, prior to 1996, had been used by incumbents for voice services alone. The most common example of high-capacity loops is the DS-1 loop, which is typically deployed as a four-wire copper loop. The Commission has consistently recognized that unbundling high-capacity loops, such as DS-1 loops, is a logical component of its loop unbundling rules. As the Commission concluded in the *UNE Remand Order*, "[i]n a DS1 loop, for example, the attached electronics boost the wire's capacity, but the wire facility used for transmission of the traffic is indistinguishable from any other copper wire."[83]

DS-1 loops come in two flavors: (1) they can be standard copper loops that travel between an ILEC central office and a customer's premises, but with the exception that they contain DS-1 electronics installed along the loop as it travels to the end user; or (2) they can be fiber loops with electronics installed at the customer's premise and the central office.[84] DS-1 loops provide services with a maximum capacity of 1.544 mbps, which is the capacity that DSL loops can provide over short distances (less than 8,000 feet).[85] However, unlike DSL loops, DS-1 loops are far more robust; they can carry a higher bandwidth signal longer distances.[86]

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83 *UNE Remand Order,* ¶ 176.
84 *See* Joint Declaration, ¶ 28.
85 *See id.*, ¶ 30.
86 *See id.*

Covad uses DS-1 loops to provide data services to telecommuters and small-to-medium-sized businesses across the country. For example, Covad provides a service called TeleXtend over DS-1 loops to individuals working out of their homes who need significant bandwidth, such as programmers, engineers, and attorneys. Covad also provides TeleXtend to such businesses as law firms, engineering firms, and copy centers. Small office and home office users have been ignored by the Bell companies, and Covad's T-1 retail offerings provide such users with access to affordable broadband services for the first time.

2. Argument

As set out above, Covad strongly supports the Commission's prior decision to unbundle all local loop transmission facilities, regardless of the speed or bandwidth they support. To that end, the Commission should continue to require ILECs to unbundle all loops, including high-capacity loops such as DS-1 loops, because, as with all loops, they are bottleneck facilities. That is to say, these are last-mile facilities serving customer premises without which CLECs would be impaired in seeking to offer their desired services. It would be infeasible for CLECs to replicate the ILECs' loop plant for purposes of offering DS-1 services, which explains why no CLEC has done so on any large scale. The fact that DS-1 loops have significantly more capacity and can deliver data at higher speeds than POTS loops does not change this conclusion.

There are no substitutes for high capacity loops such as DS-1 loops. The first candidate to evaluate obviously would be standard DSL loops. ILECs will certainly argue that Covad could serve its DS-1 customers using SDSL services provided over plain copper loops. However, that argument falls of its own weight. Customers who end

up purchasing DS-1 services generally *do* seek, in the first instance, to obtain SDSL service because Covad charges less for it.[87] These customers are often forced to use DS-1 service because they are located more than 8,000 feet from the serving central office or they are not served by copper loops at all.[88] Thus, not only are DSL loops not a substitute for DS-1 loops, but there are also economic incentives for customers to use DS-1 loops only when they truly need them. Phrased differently, and in the language of the statute, there are strong incentives for carriers not to request DS-1 loops unless they are *impaired* in offering DSL services to customers.

In addition, the Commission should be wary of ILEC claims that because certain CLECs have built out high-capacity loops to certain business customers, unbundling of high-capacity loops is no longer necessary. The Commission properly addressed, and rejected, this very argument in the *UNE Remand Order*, and there are no changed circumstances to justify altering that result. Although it may be true in limited cases that CLECs have deployed fiber facilities to large enterprise customers, such limited deployment of last mile facilities to big businesses is not relevant to the question of whether continued unbundled access to ILEC loop plant, regardless of transmission capacity, is necessary. As the Commission aptly concluded in the *UNE Remand Order*,

> [b]uilding out any loop is expensive and time-consuming, regardless of its capacity. That some competitive LECs, in certain instances, have found it economical to serve certain customers using their own loops suggests to us only that carriers are unimpaired in their ability to serve those particular customers. This evidence tells us nothing about the customer the competitor would like to serve but cannot because the cost of building a

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[87] *See id.*, ¶ 32. Covad's prices for DS-1 service are higher than SDSL service because DS-1 loop rates are much higher than DSL loop rates (sometimes by at least one order of magnitude). For example, in New York, SDSL loop rates in Manhattan are $7.70/month, compared to $82.92/month for a DS-1 loop.

[88] *See id.*, ¶ 30 (DSL loops offer bandwidth comparable to that of DS-1 loops only for loops that are less than 8,000 feet in length).

> loop from the customer premises to the competitive LEC's switch is prohibitive.[89]

In short, the existence of a minute number of CLEC-provisioned loops to large businesses does nothing to address the question before the Commission: are CLECs impaired without access to unbundled local loops? Moreover, it is beyond question that in the absence of a loop unbundling obligation, the "enormous sunk investment required to install loops would inevitably lead to competition in patches, rather than the seamless competitive service of a fully competitive market."[90] Continued access to the only ubiquitous last mile network, that of the ILECs, is the only means to ensure widespread competitive broadband offerings.

The Joint Declaration explains in detail why Covad could not use competitive fiber, cable, wireless or satellite facilities to replace DS-1 loops. To summarize that discussion briefly, those other methods of communication (1) lack the performance of unbundled DS-1 loops; (2) lack the ubiquity of DS-1 loops; (3) are not available to be leased by requesting carriers; and/or (4) would cost phenomenal sums to self-provision.[91] If Covad were denied unbundled access to DS-1 loops, its ability to offer DS-1 telecommunications services would be materially or completely diminished.

As such, DS-1 loops meet the Commission's factors for the impairment test:

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89 *UNE Remand Order,* ¶ 184.

90 *Id*., ¶ 185.

91 *See* Joint Declaration, ¶¶ 13-27. For example, although some CLECs have laid fiber rings to serve key buildings in the downtown areas of major cities, these facilities in no way approach the ubiquity of the ILEC's loop plant. In their petition to remove transport from the list of unbundled network elements, BellSouth, SBC, and Verizon essentially admitted that 75% of the commercial buildings in this country are not served by competitive fiber facilities. *See Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Joint Petition of BellSouth, SBC, and Verizon for Elimination of Mandatory Unbundling of High-Capacity Loops and Dedicated Transport*, Joint Petition, CC Docket No. 96-98, at 11 (stating that only 25% of the nation's commercial buildings are served by a competitive fiber provider).

1) "[T]he costs incurred in using alternatives to the ILEC's network" would be astronomical if CLECs were forced to self-provision either cable, wireless or satellite broadband systems, and even then (as the Joint Declaration explains at ¶¶ 13-27) requesting carriers would not receive anywhere near the same level of performance and would not be able to provide the telecommunications services they seek to provide.

2) There would be immense "delays caused by use of alternative facilities" because Covad has no right to use them and self-provisioning would be prohibitively expensive, given that Covad would have to replicate the entire ILEC nationwide loop transmission network.

3) As the Joint Declaration explains (¶¶ 13-27, 29), there would be a "material degradation in service quality" if Covad were forced to use cable, wireless or satellite facilities other than DS-1 loops, and such an analysis is irrelevant, because Covad does not have the legal right to access to any of those alternative facilities.

4) Given the immense cost associated with replicating the ILECs' DS-1 loop plant, requesting carriers do not have the ability to serve their customers ubiquitously using their own facilities or those acquired from third-party suppliers.

5) While it is likely that there would be a negative impact upon Covad's network operations of self-provisioning or obtaining DS-1 loops from a third-party supplier, the insurmountable difficulty any party would have in replicating the ILECs' loop plant means that the Commission would never find itself evaluating this criteria.

In short, the Commission should continue its policy of unbundling local loop transmission capacity, regardless of bandwidth, so as to promote innovative uses of the telecommunications network. Unbundling DS-1 loops would "promote the rapid introduction of competition" in the small and medium-sized business markets for both voice and data services, enabling requesting carriers to compete against the ILECs' T-1, frame relay and other high capacity services. Continuing this unbundling obligation will encourage "facilities-based competition, investment and innovation" because (1) CLECs will have to deploy transmission equipment in ILEC central offices in order to use DS-1

loops;[92] and (2) through the use of such equipment, CLECs will have substantial control over the services provided to end users, which would foster innovation.

Continuing the applicability of the Commission's loop unbundling rules to all loops, including such high-capacity loops as DS-1 loops, will provide uniformity and predictability to new entrants sufficient to ensure that they will be able to develop and execute regional or national business plans. The resulting market certainty will best position these CLECs to obtain capital funding.

3. Responses to Specific Commission Questions

The Commission asks (1) whether it has authority to require ILECs to activate DS-1 loops;[93] (2) if so, whether it should use this authority; and (3) what would be the limits of such authority.[94]

The Commission most certainly does have such authority and should use it. Once the Commission declares a facility to be a "network element" within the meaning of Section 251(d)(2), the Commission has authority to require ILECs to make whatever modifications are necessary to ensure that CLECs have access to it.[95] The primary ceiling on this power is that the Commission may not require ILECs to construct new network elements from scratch or network elements that are superior to what ILECs provide to themselves.[96] But those limitations do not affect the Commission's power to order ILECs to activate network elements that are already in their possession and that they routinely activate for themselves. All ILECs offer high capacity retail services over

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92 Covad has invested in, and will continue to invest in, central office equipment for the provisioning of high-capacity services utilizing unbundled DS-1 loops.

93 Presumably, the Commission is referring to the need to add electronics to DS-1 loops at the central office.

94 NPRM, ¶ 52.

95 *Iowa Utilities Bd. v. FCC*, 120 F.3d 753, 813 n. 33 (8th Cir. 1997) (citing the *Local Competition Order*, ¶ 198), *unrelated rulings vacated by*, 522 U.S. 366 (1999).

DS-1 loops. Those services, generally referred to as T-1 services, require certain attached electronics ("smart jacks") to activate the high-capacity features of the loops. The Commission's existing rules require ILECs to unbundle all attached electronics as part of the local loop UNE.[97] The Commission must once again make explicit that its loop unbundling rules require the ILEC to provide any attached electronics, such as DS-1 electronics, regardless of whether the electronics were actually attached to the loop at the time the CLEC ordered it. ILECs do not routinely maintain loops with smart jacks already attached, but rather attach them as a matter of course when a customer orders a retail T-1 line. The same practice is, pursuant to the non-discrimination requirements of section 251(c)(3) of the Act, applicable to the purchase of a UNE loop. In other words, the ILEC is required to "condition" the loop by doing exactly what it would do for its retail T-1 customer – adding an electronic attachment to the line that renders the loop capable of supporting DS-1 signals.

The Commission also asked: "should [ILECs] provide requesting carriers with access to information concerning network infrastructure [for DS-1 loops] such that the requesting carrier can adequately determine whether to order the specific requested loop from the incumbent and when that order will be completed"?[98] Part and parcel with the loop unbundling requirement is the requirement that ILECs provide information about those loops. Otherwise, the ILECs' unbundling obligation would be useless to CLECs, who would have no information regarding the availability of loop facilities, and thus could not market services to end users.

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96 *Iowa Utilitie*s, 120 F.3d at 812-13.

97 *See UNE Remand Order,* ¶ 167 (modifying the loop definition to explicitly include all "attached electronics").

98 NPRM, ¶ 70.

C. Access to DSL Loops and Line Sharing Provisioned over Hybrid Fiber/Copper Loops

1. Background

ILECs are increasingly deploying the capability to offer DSL services over hybrid fiber/copper loops ("fiber-fed DSL-capable loops").[99] This network configuration consists of a fiber loop feeder traveling from the central office to a remote terminal in the field, where digital loop carrier ("DLC") electronics convert the optical signal into an electrical one traveling over a copper loop (known as "distribution") to the customer's premises. In this configuration, ILECs can offer customers voice services alone, voice and DSL services over the same line, or DSL service alone. For the most part, the customers who are served by this configuration account for approximately 21% of the market.[100]

While there is no question that voice carriers may unbundle such loops under the current rules, ILECs refuse to unbundle the loops for data carriers unless they satisfy the packet switching unbundling rules (on the ground that the DLC contains packet switching devices both at the remote terminal and at the central office).[101] The ILECs' position is based on the Commission's prior clarifications in the line sharing docket, and clearly calls for further clarification by the Commission. The Commission dealt with these issues generally in the *SBC Waiver Order*, but must address them in this proceeding in order to settle these questions as to all ILECs, not just SBC.[102]

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[99] SBC has deployed such facilities under Project Pronto, and Verizon announced on February 20, 2002 that it would begin offering retail DSL services to end users over fiber-fed DSL-capable loops in Massachusetts starting in July of this year. *See* Joint Declaration, ¶ 34 n. 16.

[100] *See id*., ¶ 33 n. 14.

[101] *See* 47 C.F.R. § 51.319(c)(5).

[102] *In the Matter of Ameritech Corp. and SBC Communications, Inc. For Consent to Transfer Control of Corporations Holding Commission Licenses and Lines Pursuant to Sections 214 and 310(d) of the*

2. Argument

Since 1996, the Commission has required unbundling of loops that pass through digital loop carrier and similar intermediate distribution points on the transmission facility.[103] The Commission has made clear that the loop unbundling obligation extends to all loop transmission facilities, regardless of what material they are made of. A bottleneck last mile facility is still a bottleneck if it is made of copper, copper and glass, or all glass. This is so for the simple reason that the ILEC loop plant is a bottleneck monopoly facility for reasons beyond the simple physical facility. Namely, the ILECs were awarded -- under a government grant of monopoly, guaranteed rate of return, and protection against competition – the rights of way, conduits, poles, ducts, and other pathways within which they deployed the physical loop plant to virtually every home and business in the country. Even to the extent that an ILEC makes upgrades to that loop plant – such as, for example, by replacing portions of the copper facility with fiber – the loop facility is still a bottleneck facility that the ILEC must unbundle. Replacing the copper material with glass is not a "new investment" that any other CLEC could make. The ILECs still have, by virtue of their century-long monopoly, access to all of the rights-of-way that entitle them to deploy upgraded loop plant. In addition, the upgrades that do take place are to only portions of loops – specifically, the "feeder" portions between the central office and the remote terminal – and thus utilize the rest of the existing bottleneck loop plant, including all rights-of-way. Thus, even though incumbents like to

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Communications Act and Parts 5, 22, 24, 25, 63, 90, 95, and 101 of the Commission's Rules, CC Docket No. 98-141, ASD File No. 99-49, FCC 00-336 (rel. September 7, 2000) ("*SBC Waiver Order*").

[103] *See Local Competition Order,* ¶ 383 ("We further conclude that incumbent LECs must provide competitors with access to unbundled loops regardless of whether the incumbent LEC uses integrated digital loop carrier technology, or similar remote concentration devices, for the particular loop sought by the competitor.").

characterize upgrades they make to loops as "new construction" that should not be unbundled, it is important for the Commission to understand that these "new" loops are still loops. Replacement of a portion of the copper material with glass in no way changes either the nature of the entire facility or the statutory obligation to unbundle it.[104]

The Commission should thus continue to require unbundling of fiber-fed DSL loops because otherwise CLECs would be impaired in seeking to offer data services to customers who do not have all-copper loops traveling to their premises.[105] Should the Commission conclude otherwise, it will create a technical redlining – consumers who are unlucky enough to be served over a mixed copper/fiber loop will have no choice of providers beyond the monopoly incumbent and will be denied access to innovative broadband services at competitive prices. There are no alternative facilities on which the Commission could base a conclusion to the contrary. The explanation why cable, wireless and satellite facilities are unsuitable substitutes for DS-1 loops, in Section I.B above and in the Joint Declaration, applies here with equal force, and there is no need to repeat that analysis.

The main issue to consider is whether CLECs, as an alternative to leasing fiber-fed DSL-capable loops, could collocate DSLAMs at remote terminals and string together

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[104] A simple example illustrates the fallacy of the incumbents' logic. If an ILEC central office is damaged by fire or disaster, requiring the loop plant in that central office to be repaired or replaced, would the Commission then conclude that the ILEC is exempt from unbundling as to all of the loops in that central office that were replaced? Clearly not – simply making changes to the loop plant material does not change the nature of the loop as a bottleneck facility subject to the unbundling regime put in place by Congress. The voluntary undertaking by the ILEC to replace portions of loops with a different material should require no different an analysis.

[105] This is not an insignificant number of consumers. According to the Commission's 2000 ARMIS reports, of the 196 million local loop channels in service across the country, approximately 42 million, or 21% of those loops, were served at least partially over fiber facilities. *See FCC 2000 Trends in Telephone Service*, at 18-7, available at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/trend801.pdf.

the fiber feeder and copper distribution portions of the loop.[106] The Joint Declaration presents two cost estimates for remote terminal collocation. In the case of Sprint, it cost more than $130,000 to establish a collocation arrangement next to the remote terminal.[107] Qwest estimated the figure to collocate in a remote terminal at $90,000 per location.[108] As the sample business case in the Joint Declaration demonstrates (¶ 39), CLECs face more than a 14 year period just to recover the cost of collocating at remote terminals using the lower Qwest cost estimate. And that analysis excludes the other real and substantial costs of offering service (such as collocating DSL equipment at central offices, paying the recurring rates for the loop and associated dedicated transport, providing the customer with a DSL modem,). No CLEC could make money, much less attract capital, with such a business plan.

Unbundling fiber-fed DSL-capable loops is consistent with the Commission's factors interpreting the impairment test:

1) As demonstrated above and in the Joint Declaration, the "costs incurred in using alternatives to the ILEC's network" would be absolutely huge and certainly more than any CLEC could bear. The CLEC would be forced to duplicate the incumbent's loop architecture, which as set out in detail above is an economic and technical impossibility.

2) The Joint Declaration demonstrates that the "delays caused by use of alternative facilities," specifically collocating in remote terminals, would be on the order of 10 years. [109]

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106 Although this analysis pre-supposes that the feeder and distribution portions of the loop each will be network elements able to be unbundled, it is appropriate to take that liberty for purposes of the impairment analysis. If Covad can show impairment when it must collocate in the field to combine the loop network elements of the ILEC, Covad certainly would be able to make the showing in cases in which it would have to install its own loop equipment.

107 *See* Joint Declaration, ¶ 39 n. 23 (citing *ex parte* letter of Richard Juhnke (Sprint) to Magalie Roman Salas, CC Docket Nos. 96-98 & 98-147, dated July 18, 2001). Sprint had to engage in "adjacent collocation" because there was not enough room in the ILEC's RT to collocate there. Covad expects that Sprint's experience will prove to be commonplace.

108 *See id.*, ¶ 39.

109 *See id.*, ¶ 38.

3) There would be a material degradation in service quality associated with denying CLECs access to fiber DSL loops, because collocating a stand-alone DSLAM at a remote terminal creates many more points of failure and thus lowers the quality of service to the end user.

4) Because of the tremendous costs associated with remote terminal collocation, requesting carriers choosing that path would not be able to serve their customers ubiquitously, if at all.

5) It would be very difficult for CLECs who collocate at remote terminals to manage their network operations, primarily because few ILECs intend to give collocators direct access to collocated equipment.[110]

It is not surprising that both Illinois and Wisconsin applied the impairment test to fiber-fed DSL-capable loops and concluded that they must be unbundled.[111]

Unbundling fiber-fed DSL-capable loops is likely to promote the "rapid introduction of competition" in the traditionally under-served residential and home office market, mostly because fiber DSL loops tend to serve residential areas. Adopting this unbundling obligation will promote facilities-based competition because, as with mainstream DSL today, competitors will need to deploy their own central office-based DSLAMs and ATM equipment to cover this new market. The Commission's rules also will promote innovation if they allow competitors to vary the quality of service ("QoS") of the DLC operating the fiber DSL loops, as Covad proposes in its draft rule below.[112]

Maintaining an unbundling obligation for fiber-fed DSL-capable loops will "provide uniformity and predictability to new entrants" in a way that remote terminal

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[110] *See id.*, ¶ 38 n. 20.

[111] *See Order on Rehearing, Illinois Bell Telephone Company: Proposed Implementation of the High Frequency Portion of the Loop (HFPL)/Line Sharing Service, Illinois Commerce Commission*, Docket No. 00-0393, at 36 (Ill.Com.Com. September 26, 2001) ("*Illinois Pronto Order on Rehearing*") (finding that CLECs were impaired without access to Project Pronto, because otherwise they would have to spend $130,000 to upgrade each of 2100 RTs in Illinois to be DSL-compatible); *Final Decision*, *Investigation into Ameritech Wisconsin's Unbundled Network Elements*, Docket No. 6720-TI-161, at 4 (Wi.P.S.C. March 22, 2002).

collocation simply never could. Rather than forcing CLECs to go through the wringer of looking for collocation space at every remote terminal, which inherently will yield wildly varying results, a Commission rule that continues its longstanding requirement that ILECs unbundle fiber-fed DSL-capable loops would enable CLECs to count on being able to serve *all* end users who have fiber-fed loops (and for whom the ILEC has decided to upgrade the remote terminal electronics). Such an unbundling rule would create the kind of market certainty necessary to generate funding for the new equipment CLECs will need (while, on the contrary, the uncertainties associated with remote terminal collocation will make capital largely unavailable). In addition, ILECs should welcome the unbundling of fiber-fed loops – CLECs will be important customers for those loops and will assist in the funding of such network upgrades. Because they are statutorily obligated to pay the ILECs' cost plus a reasonable profit for such loops, CLECs should be a cherished wholesale customer of the ILECs.[113]

Continuing to require the unbundling of fiber-fed DSL-capable loops is administratively practical, as the Commission demonstrated in the *SBC Pronto Waiver Order* when it set up, pursuant to SBC's own request, a quasi-unbundling regime for SBC's broadband service offering. And, in any event, unbundling fiber-fed DSL-capable loops as *one* network element is vastly more administratively practical than forcing CLECs to unbundle these facilities as multiple network elements that would only be accessible through the torturous process of remote terminal collocation.

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[112] *See* Joint Declaration, ¶ 42 (discussing the importance of CLECs being able to adjust QoS settings on DLC).

[113] Indeed, it is not difficult to imagine why ILECs would voluntarily give up a vibrant wholesale market that would help guarantee them a return on their network investments. As demonstrated by their advocacy in this proceeding, the ILECs would gladly forgo such revenue if they could instead recapture their monopolies.

3. Responses to Specific Commission Questions

The Commission has asked what the "level of competitive demand for unbundled packet switching" is.[114] This question essentially asks: how many customers could CLECs serve if they had unconditional access to packet switching deployed ubiquitously throughout the network? During 2001, Covad had to turn away over 24,000 end users across the country because they could only be served over a fiber-fed DSL-capable loop configuration, which the ILECs argue (incorrectly) incorporates a packet switching function and thus is not subject to unbundling. This number likely would have been higher had Covad and its Internet service provider partners actually targeted marketing efforts at such customers. Such service denials highlight the urgent need for further Commission clarification of the exact parameters of its unbundling rules.

The Commission has asked what the impact would be of unbundling fiber-fed DSL-capable loops on the level of ILEC investment in remote terminal packet switching facilities.[115] The impact would be minimal, if even detectable at all. If anything, the impact would be positive for ILECs, because they would have a robust wholesale market, in addition to their retail offerings, by virtue of CLEC customers purchasing fiber-fed DSL-capable loops. ILECs make investment decisions based upon business plans that look at (1) the entire market over the long-term; and (2) opportunities to leverage existing investments and the synergies that exist between related markets. When ILECs consider whether to enter the broadband market for customers served over fiber-fed loops, three facts jump out at them. First, the penetration of broadband across the country is currently around 11%, leaving a huge addressable market to be served. That percentage is almost

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[114] NPRM, ¶ 62.
[115] NPRM, ¶ 62.

certainly lower for end users served by fiber-fed loops, because their only real option for broadband connectivity has been cable modem service. Consequently, any ILEC examining its prospects for success in marketing broadband service over fiber-fed loops very quickly would recognize that nearly 90% of the market is contestable.

Second, ILECs can offer broadband DSL service to customers with fiber-fed loops over nearly the same facilities as they use to provide local telephone service.[116] In this circumstance, broadband service appears to be, more than anything else, a feature added to local telephone service. Unsurprisingly, it costs an ILEC more *not to offer* broadband service, because the cost per unit of voice service operating on these facilities alone is much higher than when the costs are spread over two services (even if the take rate for the broadband component is much lower than the rate for the voice service). At the same time, ILECs are mindful that CLECs without a facilities-based voice product are competing at a distinct disadvantage.

Facing an immensely contestable market for broadband service and armed with ferocious economies of scale, ILECs are hardly likely to be deterred from deploying new broadband investment merely by the threat of having to unbundle the facilities for an industry known more for exiting, rather than dominating, markets.[117] ILECs may give lip

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[116] Verizon and SBC, for example, use Alcatel's Lightspan 2000 DLC at their RTs. Upgrading Lightspan 2000 DLC to handle DSL services requires merely that the ILEC install slightly different electronics into the existing DLC equipment. *See id.*, ¶ 34 n. 16.

[117] One market analyst observed that: "*Unbundling requirements are immaterial since there's no one left to buy unbundled network elements*. The DLECs and resellers have all but disappeared as a factor in residential broadband. Almost all of the second-tier DLECs and resellers have closed their doors, including Comdisco (Prism), Fastpoint, Flashcom, HarvardNet, Relaypoint, Vectris and Zyan, among others. And among the three nationwide DLECs, only Covad remains, having just emerged from bankruptcy. In the FCC's recent report, it stated that *93% of all DSL lines in service are provided by ILECs*, meaning that all the IXCs, CLECs and DLECs collectively account for the balance. One issue that has arisen over the past year has been access to remote terminals. Specifically, SBC management slowed down the deployment of its Project Pronto initiative (which is aimed at pulling fiber to remote terminals, reducing copper loops and therefore broadening DSL availability throughout its footprint) early last year, claiming regulatory uncertainty made it difficult to proceed. As a result, removing unbundling

service to the contrary argument before the Commission, but their message to the rest of the industry is quite different. If the Commission wants to know what ILECs really think of their chances in the market for DSL services over fiber-fed loops, it should look at their investor briefings, where they routinely tout their *current* and future capabilities to address this market.[118] ILEC threats not to deploy equipment for offering DSL services over fiber-fed loops ring hollow in light of the overwhelming economic incentives running the other direction and the fact that they actually have made such investments. For example, BellSouth,[119] SBC[120] and Qwest[121] each already have purchased and deployed DSL equipment in a substantial number of remote terminals. Verizon has "pre-positioned" certain remote terminal equipment to be able to handle DSL services when

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requirements could persuade SBC to move forward faster and have a marginal impact on nationwide DSL availability. However, *it's hard to imagine that DSL deployment has been significantly hampered by concerns about unbundling requirements when there's virtually no one left to purchase these unbundled elements anyway*." *Broadband Brief - What Does Telecom Deregulation Mean For Cable?* Bank of America Securities, Douglas S. Shapiro, Part 1 of 2, (March 13, 2002) (emphasis added).

[118] Indeed, in 1999, SBC announced that it would invest $6 billion in equipment to offer DSL services over fiber loops across its region. *See SBC Announces Sweeping Broadband Initiative*, SBC Investor Briefing, at 2 (October 18, 1999).

[119] BellSouth stated on January 3, 2002 that it had deployed "DSL in more than 8,600 remote terminals, more than any other DSL provider in the industry." *BellSouth Captures 620,500 DSL Customers and Deploys Broadband Capabilities to More than 15.5 Million Lines*, BellSouth Press Release, http://bellsouthcorp.com/investor/ (dated January 3, 2002). In its 2001 Report to Shareholders, BellSouth stated (at 11) that: "The key to deploying broadband efficiently is to upgrade the network facilities, called *remote terminals*, that serve areas with high propensity to buy [DSL]." *See* 2001 Report to Shareholders, BellSouth Corporation, http://www.bellsouth.com/investor/pdf/BS2001AR.pdf (emphasis added).

[120] Although it claims to have cut back its plans for Project Pronto significantly, SBC has apparently deployed a substantial percentage of such facilities. *See* SBC Investor Briefing No. 228, at 2 (January 24, 2002), available at http://www.sbc.com/investor_relations/financial_and_growth_profile/investor_briefings (SBC expanded its DSL-capable footprint by 37% in 2001). Moreover, to the extent that SBC has made any such alleged cuts, they are not based upon the regulatory environment, as SBC claims. Rather, SBC's management seems to be more concerned about its own inefficiency in deploying new services profitably as it struggles to maintain high earnings-per-share and its customary shareholder dividend.

[121] *See Qwest To Expand High-Speed Internet Service To 2.5 Million More Customers In 11 Western States*, Qwest Press Release (May 22, 2001) ("Qwest has taken several important steps in preparing for expansion of its DSL coverage area. The company *recently installed* technology that allows DSL equipment to be placed out in our local telephone networks and closer to customer homes and businesses, enabling Qwest to provide up to 60 percent more customers with high-speed, broadband Internet access by the end of 2002. The technology, referred to as a *remote terminal*, provides customers with the same telephone line quality and speed as those serviced directly from a central office.") (emphasis added).

upgraded by adding new line cards to the DLC and plans to roll-out retail services based thereon in the next few months.[122]

The Commission asks two other questions in paragraph 24 of the NPRM that seem related to its question, in paragraph 62, whether unbundling obligations would discourage ILECs from investing in new technologies at the remote terminal:

1) Should fiber loops should be "categorically de-listed"?

2) Should the Commission redo its pricing rules to let ILECs "recover for any unique costs and risks associated with such [new] investments" in lieu of limiting the degree to which the facilities may be unbundled?

First, the Commission should not categorically deny CLECs the opportunity to lease fiber loops on an unbundled basis, because (as Section I.A above demonstrates) CLECs are severely impaired in offering their services over all loop plant, including fiber-fed loops. The fact that the loop is made of copper/fiber, and not just copper, does not alter the bottleneck nature of a local loop facility.

Second, there is no need for the Commission to re-write the TELRIC rules to account for any "unique" costs or risks ILECs may experience in making new investments. TELRIC already allows ILECs to recover the costs of new investments.[123] As the Commission represented to the Supreme Court, "TELRIC is designed to compensate incumbents for their full forward-looking costs of providing network elements."[124] TELRIC also accounts for the risks ILECs take in making investments.[125]

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122 *See* Joint Declaration, ¶ 34 n. 16.

123 Because TELRIC requires ILECs to assume that the local network is reconstructed with the most efficient telecommunications technology currently available (assuming the existing location of the central offices remains unchanged), *Local Competition Order*, ¶ 685, ILECs allegedly base their cost studies upon new investment in state of the art facilities.

124 *Verizon Communications, Inc. v. FCC*, Nos. 00-511, 00-555, 00-587, 00-590, 00-602, Reply Brief of United States and FCC, 2001 WL 881216, at *14 (S.Ct. July 23, 2001).

To the extent the Commission nevertheless believes that ILECs have a legitimate concern with TELRIC's application to new construction of facilities, the Commission's inclination to address those concerns through an analysis of TELRIC, rather than limiting unbundling obligations, is correct. The Commission should certainly not address the ILECs' pricing concerns by eliminating the underlying unbundling obligation altogether. Rather, the Commission should commence a separate rulemaking proceeding to examine the extent to which any modifications to TELRIC, if any, should be made in order to address the pricing concerns raised by the ILECs. While the Commission conducts such an inquiry, should it deem such an undertaking necessary, it must make clear that fiber-fed loops will continue to be available at TELRIC prices in the absence of any final Commission ruling to the contrary.

Lastly, the Commission asks whether its current definition of packet switching is correct as a technical matter.[126] The Commission should take the opportunity presented in this proceeding to correct longstanding confusion regarding the exact scope of its fiber loop unbundling rules. In particular, ILECs have seized on purported ambiguity in the Commission's rules unilaterally to deny Covad and other CLECs access to certain fiber-fed loops. The Commission's bar on unbundling packet-switching, except in limited circumstances, has been taken by the ILECs as an excuse not to unbundle DSL loops that pass through remote terminals. Specifically, the ILECs claim that those remote terminals provide "packet switching" functionality, and thus CLECs are not entitled to access loops that pass through such terminals. This could not have been the Commission's intent.

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[125] *Id*., at *12 n. 8 ("an appropriate cost of capital determination [under TELRIC] takes into account not only existing competitive risk as the FCC explicitly recognized (see Local Competition Order (para. 702) . . .), but also risks associated with the regulatory regime to which a firm is subject.").

[126] NPRM, ¶ 61.

The Commission should clarify that its packet switching rules apply to stand-alone packet switches and not to the functionalities of local loops that pass through remote terminals, digital loop carriers, and similar remote concentration devices. Rather, as set out in greater detail below, the Commission must make clear that the ILECs' loop unbundling obligations extend to all loop facilities and attached electronics that are necessary to conduct end-user telecommunications transmission from the end user's premise to the ILEC's central office.

4. Recommended Rule on Fiber DSL Loops

Based upon the foregoing, Covad urges the Commission to clarify its existing loop unbundling rules by defining the exact parameters by which ILECs must make fiber-fed loops available to requesting carriers. Specifically, Covad proposes the following loop definition to guide the Commission's deliberations:[127]

> (1) Local loop. The local loop network element is defined as a circuit- or packet-switched transmission facility between a distribution frame, optical concentration device, ~~(or its equivalent)~~ or equivalent device in an incumbent LEC central office and the loop demarcation point at an end-user customer premises, including inside wire owned by the incumbent LEC. The local loop network element includes all features, functions, and capabilities of such transmission facility. Those features, functions, and capabilities include, but are not limited to, dark fiber, attached electronics (including the ability to alter the quality of service settings thereof)~~(except those electronics used for the provision of advanced services, such as Digital Subscriber Line Access Multiplexers)~~, and line conditioning. The local loop includes, but is not limited to, DS1, DS3, fiber, and other high capacity loops. ~~The requirements in this section relating to dark fiber are not effective until May 17, 2000.~~[128]

The Commission should also delete the portion of its rules that limits CLEC access to

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127 *See* 47 C.F.R. § 51.319(a)(1).

128 Covad deleted the effective date for the dark fiber unbundling rules because it is no longer needed. The Commission should, however, continue to unbundle dark fiber, for the same reasons it previously concluded dark fiber should be unbundled.

packet switching at the remote terminal.[129] The Commission should clarify that its packet switching rules address only stand-alone packet switching equipment in central offices and not functionalities of the loop plant. In addition, the Commission should note that remote terminal-delivered DSL loops terminate in the central office on an optical concentration device ("OCD"), unlike traditional fiber loops carrying voice services that terminate on either DLC equipment or the ILEC's switch. An OCD acts essentially as an ATM demultiplexer and a termination point that is the equivalent of a main distribution frame. In other words, the OCD is the first point in the central office at which the signal from the loop terminates (by converting from optical to electrical form). The OCD also demultiplexes and distributes the signal to its next destination. The Commission must make clear, as part of its unbundling rules, that CLECs are entitled to access the loop at that OCD. In addition, the Commission must make clear that ILECs are required to provision the cross-connect capabilities of the OCD port upon request from the CLEC and to provision that cross-connect either to the CLEC's collocation space or to interoffice transmission facilities of the CLEC's choosing for transport out of the central office.

II. ACCESS TO ILEC DEDICATED INTEROFFICE TRANSPORT

1. Background

Dedicated interoffice transport ("transport") consists of point-to-point high capacity circuits almost always provisioned over fiber facilities (although some copper transport facilities may still be in use).[130] An individual piece of transport can be an entire facility or a channel riding on a larger facility. In the case of entry-level DS-1

[129] The Commission should delete 47 C.F.R. § 51.319(c)(5).

transport, the service is more than likely to be channelized on a DS-3 or OC-N facility.[131] Transport facilities are analogous to local loop facilities in several important respects. First, transport facilities include more than simply the material they are made of. As with loops, the true costs of building a transport network include the costs of poles, trenches, rights-of-way, conduits, and similar pathways for the facilities. Over the course of the last century, ILECs have constructed a massive nationwide network of interoffice transport, connecting ILEC central office and wire centers to each other. It is not an exaggeration to note that there is not a single ILEC central office that is not connected to another wire center via ILEC interoffice transport. The network is ubiquitous, it is in the ground today, and it connects the vast array of millions of end user loops to the telecommunications network. Indeed, the Commission's ARMIS report for 2000 found 5.6 *billion* kilometers of digital interoffice transport circuits in the networks of the ILECs.

Competitive transport has been in place since before the 1996 Act, but it does not offer a substitute for the ubiquitous interoffice transport network of the ILECs. So-called competitive access providers, or CAPs, historically provided connectivity between ILEC central offices and points-of-presence of interexchange carriers. Those CAPs did not, however, typically connect ILEC central offices to one another. There are two flavors of CLEC-provided transport: (1) Type-1, which is transport provided entirely over a CLEC's own facilities; and (2) Type 2, which is transport provide over both CLEC and

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130 Although Covad focuses on dedicated interoffice transport in this section, Covad strongly believes that the Commission should continue to make shared transport available to requesting carriers as well.

131 *See* Joint Declaration, ¶ 48.

ILEC facilities.[132] When it leases CLEC-provided transport, Covad needs Type 1 facilities in order to minimize failure points in the circuits.[133]

2. Argument

The Commission should retain transport as an unbundled network element because, without it, CLECs would be impaired in offering their services. There simply does not exist ubiquitous alternative transport that would justify denying CLECs access to unbundled transport. For the most part, the Commission has heard these arguments already in last year's proceedings on the petition of BellSouth, Verizon, and SBC to remove transport from the list of unbundled network elements. While Covad does not wish to rehash the record of that case (but does incorporate by reference into this proceeding all pleadings it submitted in that docket), it is appropriate to summarize the reasons why the impairment test, as well as the Commission's additional factors, require transport to be an unbundled network element.

In the Declaration of Mark Shipley and Marie Chang ("Shipley/Chang Declaration"), Covad presented the Commission data on the alternative transport available to it in four key markets: Chicago, New York City, San Francisco and Washington, D.C.[134] That data (which was current as of June 11, 2001) demonstrated that, about half of the time, the only transport available to Covad is provided by the ILEC.[135] Without unbundled transport, Covad would be stranded at nearly 50% of its collocation sites. And if Covad were to expand its 1700 central office network to

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132 Shipley/Chang Declaration, ¶ 11.

133 *Id*..

134 Shipley/Chang Declaration, ¶¶ 13-18.

135 *Id*., ¶ 18 & Table 1. The declaration also explained that many of the alternative providers offer only Type 2 transport, which relies upon ILEC facilities and is therefore not a true alternative network that the Commission could consider in its unbundling analysis. *Id*., ¶ 11.

compete with the ILECs' 3200 central office footprint (which Covad hopes to do), the situation likely would be worse (because the additional 1500 central offices are in somewhat less developed areas of the country, and thus have even fewer, if any, alternative transport options).

In any case, the data may overstate the degree of competition in the market. As the Commission knows, the current drought in the capital markets for telecommunications companies has led to many of them collapsing.[136] And the end does not appear to be in sight for the industry's funding woes. Accordingly, the Commission should take ILEC arguments about the state of local competition, and the availability of alternative transport, with a grain of salt. The fact that there currently may be one or two other providers of transport in a given central office is no guarantee that Covad will have transport available to it when it needs to make that decision. In particular, the mere existence of a collocated CLEC in a central office (which is most likely the basis for the ILECs' claim of a competitive alternative) in no way means that the need for UNE interoffice transport is eliminated. First, the collocated CLEC may have no capacity whatsoever (Covad, for example, has several dozen of its central office collocation sites in a "go dark" mode, in which the transmission equipment is in place but not operating). Second, the existence of a CLEC in a central office does not mean that the CLEC offers transport connected to other central offices. Indeed, the CLEC's transport offerings may originate in the central office, but may terminate in an office building or other off-site facility. The Commission must examine very carefully any ILEC claims of the availability of competitive interoffice transport offerings. Finally, the Commission

[136] As the Commission knows, such carriers as Teligent, Winstar, XO, and MFN each are transport providers that have had serious financial problems.

previously has heard, and rejected, ILEC arguments regarding competitive fiber facilities. In 1999, the Commission weighed evidence in the record that CLECs had deployed tens of thousands of route miles of fiber facilities. Nevertheless, the Commission rejected incumbent claims that it was no longer necessary to unbundle transport. Specifically, the Commission concluded that "there are few, if any alternative transport facilities outside the incumbent LECs' networks that connect all or most of an incumbent LEC's central offices and interexchange carriers' points of presence within an MSA."[137] The same is true today. CLEC fiber networks connect to large businesses in urban areas – they do not connect ILEC central offices to one another in a ubiquitous fashion.

In short, there is no carrier but the ILEC that has a ubiquitous network of transport facilities. This is particularly important for Covad, which has a policy of collocating nearly ubiquitously in the markets it enters. For example, in the Baltimore/Washington D.C. market, Covad is collocated in over 110 central offices. Covad has placed ATM equipment in three central offices in the Baltimore/D.C. market, in order to aggregate end users' traffic for delivery to ISPs, other CLECs, and corporate LANs. That ATM equipment is located in Verizon central offices in Arlington, Baltimore, and Silver Spring. In order to access those switches and hand traffic off to its ISP and CLEC customers, Covad must connect all of its 110+ collocated DSLAMs with those three offices. The remarkable network of interoffice transport connecting all of those 110+ Verizon central offices together is provided by only one entity: Verizon itself.[138] Verizon constructed that transport network when it had the monopoly capability of

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137 *UNE Remand Order,* ¶ 343.

138 In the *UNE Remand Order* (¶ 341), the Commission placed special emphasis on the need of requesting carriers for ubiquitous transport: "without access to unbundled dedicated transport, requesting

investing huge sums, acquired from its captive rate base, and the government grant of exclusive rights of way. Covad has no option other than Verizon's UNE transport for operating its network.

The Shipley/Chang Declaration also discussed the wildly divergent price differential between unbundled transport and the special access services of ILECs.[139] In some cases, the rates for special access are more than three times the rates for unbundled transport.[140] As the Commission knows well, the access rates of ILECs often exceed their underlying costs by a wide margin. Covad would find it impossible to offer service if its transport costs increased by such a huge measure. In addition, the Commission has concluded that the availability of retail service offerings from the ILEC is no substitute for access to unbundled facilities.

Unfortunately, even in those rare circumstances where Covad has access to competitive transport, it is priced to be comparable to the ILEC's special access services. Competitive transport providers target special access retail customers, not other carriers like Covad, and therefore set prices typically by discounting the ILEC's special access service rates by 20%.[141] Covad remains impaired because this slight discount applies to rates that, as noted above, are more than three times UNE transport rates. In fact, the Commission expressly recognized this point in the *UNE Remand Order* when it found that CLECs can still be impaired without transport even when the ILEC has met the criteria for pricing flexibility of its special access services:

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carriers would be forced to create a patchwork of alternative network facilities, where they have been deployed and are being offered to other carriers, or alternatively to construct their own transport facilities."

[139] Shipley/Chang Declaration, ¶¶ 19-22 & Table 2.

[140] *Id*., at Table 2.

[141] *See* Joint Declaration, ¶ 44.

> we recognize that the Commission has established a framework for incumbent LEC pricing flexibility in areas where competition for dedicated transport and most special access services has developed. *Competition evidenced by the satisfaction of certain triggers, to the extent they are met, however, does not demonstrate that a requesting carrier is not impaired without access to unbundled dedicated transport*. The Commission's pricing flexibility rules provide for flexibility where one requesting carrier is collocated in a serving wire center. These rules allow incumbent LECs to meet competitive transport entry with pricing flexibility. They do not, however, describe market conditions where requesting carriers would not be impaired without access to unbundled transport. Furthermore, *even in those areas where competition for special access services is present and where, presumably the triggers for pricing flexibility have been met, the price differentials between TELRIC- priced transport and special access may persist for an indefinite period of time because the differential between unbundled transport and retail special access services are significant*.[142]

Having previously concluded that the existence of special access competition, in which carriers compete at special access price levels, does not alleviate impairment, the Commission cannot conclude now to the contrary without acting in an arbitrary and capricious manner.

In addition, it is not feasible for Covad to self-provision transport. As the Joint Declaration and the Shipley/Chang Declaration make clear, placing fiber transport is an expensive business and not one that Covad could be expected to enter anew during this time of scarce capital.[143] Indeed, even Qwest, which is both an ILEC in fourteen states and a facilities-based competitor in other ILECs' markets, supports unbundling transport because it lacks the resources necessary to self-provision these facilities in many cases.[144]

Based upon the foregoing, unbundling transport is consistent with the Commission's factors interpreting the impairment test:

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142 *See Line Sharing Order*, ¶ 341 n. 673 (citing Comments and Affidavit of Covad).

143 Shipley/Chang Declaration, ¶¶ 6-7; Joint Declaration, ¶ 45. Indeed, several companies have built their own transport networks and gone bankrupt doing so (*e.g.*, XO, Teligent, Winstar, etc.).

1) The "costs incurred in using alternatives to the ILEC's network," in the extremely limited circumstances where such alternatives are available, are nearly as substantial as leasing special access, which the Commission previously found not to be a viable alternative for requesting carriers.[145]

2) While there are likely to be serious "delays caused by use of alternative [patchwork] facilities," they are over-shadowed by the general lack of ubiquitous alternatives.

3) There can be a "material degradation in service quality" in cases where Covad could not purchase Type 1 facilities (*i.e.*, facilities entirely on the network of another carrier). Taking the Type 2 facilities out of the analysis decreases the amount of competitive alternatives available to Covad. In the vast majority of central offices in the country in which there are no ubiquitous alternatives to the ILEC interoffice facilities, the degradation would be irrelevant, because Covad would simply be unable to access any end users.

4) Covad truly does not have the "ability … to serve its customers ubiquitously using its own facilities or those acquired from third-party suppliers" because of capital constraints and the general lack of alternative providers, discussed above.

5) There would be a negative impact upon Covad's network operations of self-provisioning transport because Covad lacks expertise in that field.[146] The same result would be true, albeit to a lesser extent, if Covad were forced to purchase transport from alternative providers that do not have Type 1 facilities.

Unbundling ILEC transport is also extremely "likely to promote the rapid introduction of competition in all markets." Transport is the glue that holds all telecommunications services together, including voice and data services and residential and business services. Specifically, Covad must access such transport facilities in order to transmit end user traffic to its points of interconnection with ISPs and other CLECs,

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144 *See* Comments of Qwest Communications Corporation, CC Docket No. 96-98 (dated June 11, 2001).

145 *See UNE Remand Order*, ¶ 354 ("We also reject GTE and US West's argument that competitive LECs have access to ubiquitous transport through the use of the incumbents' special access tariff arrangements.").

146 *See* Joint Declaration, ¶ 45.

which are usually in other ILEC central offices. Making transport available on an unbundled basis will help foster competition in all of these markets.

Retaining the obligation for ILECs to unbundle transport will encourage carriers to invest in collocation at ILEC central offices, which in turn "will promote facilities-based competition, investment and innovation." In fact, the only reason to purchase dedicated transport, which by definition travels between ILEC central offices, is to connect equipment collocated there. Collocating carriers invest in their own facilities and therefore have the ability to innovate (as opposed to carriers that are reselling some other party's services).

3. Responses to Specific Commission Questions

The Commission asks: to what extent must ILECs modify their existing networks in order to provide CLECs with access to unbundled transport?[147] Although ILECs should not be required to build new transport facilities solely for the purpose of unbundling those facilities for CLECs, ILECs must modify existing transport facilities in whatever manner is necessary to give a CLEC, that is collocated in the same premises as a termination point of the transport, access to it. The Eighth Circuit Court of Appeals held that, while ILECs need only unbundle their existing networks, they do have to modify them "to the extent necessary to accommodate interconnection or access to network elements."[148] In addition, the Court found that, while ILECs are not obligated to provide superior quality network elements to CLECs, ILECs at least must provide such elements at quality levels that are equal to what they provide to themselves.[149] Thus, if

147 NPRM, ¶ 65.
148 *Iowa Utilities Bd.*, 120 F.3d at 813 (citing *Local Competition Order*, ¶ 198).
149 *See id.*

ILECs take steps to activate the electronics of existing transport runs for themselves, they must do so for other requesting carriers.

The Commission asks whether ILECs should have to provide SONET rings on an unbundled basis and whether there are specific characteristics of SONET technology or ring architectures that warrant an exemption from unbundling.[150] As the Joint Declaration explains, almost all ILEC transport is based upon SONET technology.[151] So, an unbundling exemption for SONET technology potentially would undo the Commission's transport unbundling rules.[152] That said, there really are no distinctive characteristics of SONET technology that would justify an unbundling exemption separate and apart from whatever unbundling rules arise from the Commission's general deliberations on the impairment test and related factors.[153]

III. ACCESS TO ILEC OSS

1. Background

Operations support systems ("OSSs") are the computer systems, processes, data and information, and related functions that perform pre-ordering, ordering, provisioning, billing, maintenance and repair tasks anywhere in the ILEC networks.[154]

2. Argument

Covad supports the Commission's current OSS unbundling rules, subject to the adoption of the important clarifications set out below. CLECs that lease unbundled network elements are impaired without access to the ILECs' OSS, and in particular

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150 NPRM, ¶ 66.

151 *See* Joint Declaration, ¶ 46.

152 The Joint Declaration also notes that fiber loops use SONET technology as well and would be affected by a decision not to unbundle SONET facilities. *Id.*, ¶¶ 46-47.

153 *Id.*, ¶ 47.

154 *See* 47 C.F.R. § 51.319(g).

without automated access to whatever information is capable of being accessed in an automated manner. Indeed, at a fundamental level, OSS makes unbundling (in whatever form) possible, because the use of manual pre-ordering, ordering, provisioning, billing, maintenance and repair functions would not be scaleable for CLECs. As the Joint Declaration explains, for CLECs to be viable businesses, they need to perform these functions for substantial volumes of network elements. Forcing CLECs to use manual processes would knock them out of the market. Similarly, denying a CLEC access to information regarding the ILEC's network and facilities that the ILEC possesses anywhere in its network would impair the CLEC's ability to offer the services it seeks to provide.

Moreover, CLECs cannot rely upon third-party sources of OSS, because no party other than the ILEC has information regarding the ILEC's network and facilities, nor can any third party facilitate interaction with the ILEC's legacy systems more efficiently than can the ILEC itself. CLECs leasing unbundled network elements have no choice but to use the OSS of the carrier providing the elements (*i.e.*, the ILEC). Consequently, CLECs easily meet the factors of the impairment test:

1. "The costs incurred in using alternatives to the ILEC's network" and the "delays caused by use of alternative facilities" are irrelevant because there are no alternative OSS providers.

2. There would be a "material degradation in service quality" if CLECs were forced to perform OSS functions manually (as explained above). Indeed, if CLECs that rely on UNEs were denied access to OSS functions, they would be completely unable to offer service to their end users.

3. Requesting carriers must use the OSS of the ILEC providing unbundled network elements, as noted above, and cannot use their own or another party's OSS (ubiquitously or otherwise).

4. It is simply not possible for Covad to self-provision OSS or acquire it from a third-party supplier; so the impact of not having access to OSS would be devastating for Covad's network operations.

Unless the Commission wipes out unbundling obligations entirely, it must leave the OSS unbundling rules in place. The only question is whether they need to be updated or clarified, given the Commission's experience with OSS unbundling since 1999.[155] The Commission must make clear, as it did in the *UNE Remand Order*, that the OSS unbundling obligation extends to all information that the ILEC possesses anywhere in its network and that such information must be provided on an electronic basis to the extent technically feasible. CLECs should be able to access such information for any particular customer using the applicable telephone number, just as ILECs do.[156] Thus, for example, ILECs must make access to loop makeup information available on an automated basis referenced by the applicable telephone number and must make fully electronic ordering of those loops available to requesting carriers.

The Commission should act specifically to correct the failure of ILECs to make available OSS for transport. Most ILECs lack any system to indicate to CLECs, in advance of placing an order, whether unbundled transport facilities exist between any two given points. CLECs have no choice but to submit transport orders blindly and wait for some of them to be rejected for lack of facilities. Unquestionably, ILECs have an obligation under the UNE Remand Order to make this information available to CLECs, but they have not done so. The Commission's order in this proceeding should leave no doubt that ILECs must construct adequate interfaces to its OSS information on transport availability.

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155 NPRM, ¶ 70.

The Commission also should direct ILECs to provide interfaces to their OSS information about all loop information, including fiber-fed DSL-capable loops. In particular, CLECs require remote terminal feature availability information, such as what software release the remote terminal uses, what channel units are in place in the remote terminal, and what general features and functionalities are available on an remote terminal by remote terminal basis. While, as with transport, ILECs already have an obligation to make this information available under the *UNE Remand Order*, they generally have not done so. Without this information, CLECs would be unable to perform necessary pre-ordering functions for fiber-fed DSL-capable loops. Therefore, it is appropriate for the Commission to order ILECs to make this information available to CLECs.

IV. RESPONSES TO THE COMMISSION'S GENERAL QUESTIONS

In this section, Covad answers some of the Commission's general questions, which are paraphrased below in italics.

1. *Given that the standard for impairment calls for the FCC to determine whether lack of access to a UNE "materially diminishes " a requesting carrier's ability to provide the services it seeks to offer, and that the FCC considers factors including "cost, timeliness, quality, ubiquity, and operational issues," should the FCC assign more or less weight to any of these factors? (19)*

The Commission should prioritize these factors in the following order: (1) ubiquity; (2) cost; (3) quality; (4) timeliness; and (5) operational issues.

- *What considerations should guide the FCC's unbundling analysis, given that its previous considerations included: the rapid introduction of competition into all markets; promotion of facilities-based competition, investment and innovation; reduced*

[156] Similarly, CLECs should be able to order the line sharing UNE for a particular customer using just the telephone number whenever ILECs do so for their own customers.

regulation; market certainty; and administrative practicality? (21)

The Commission should adopt, as an explicit factor in its analysis, the goal of speeding the deployment of advanced services. Such a goal is not only a longstanding component of the Commission's unbundling analysis -- it is a statutory mandate. Section 706 of the Act requires the Commission to take affirmative steps to promote the rapid deployment of advanced services, such as DSL. The Commission should continue to promote the deployment of facilities-based deployment, coupled with the Commission's recognition that facilities-based competitors need unbundled access to bottleneck ILEC transport and loop facilities. In analyzing investment and innovation, the Commission must take note not only of future investment, but of past investment made by CLECs such as Covad on a massive scale in reliance on the Commission's UNE rules.

- *How would the FCC make the advanced services mandate in Section 706 of the Act an explicit factor in its unbundling analysis? (21)*

The Commission should specifically consider whether lack of access to a network element impairs a requesting carrier's ability to provide the advanced service that it seeks to offer. In particular, the Commission should consider the extent to which any modifications of its existing unbundling rules would materially reduce the access of consumers to innovative broadband services at competitive prices. Such an analysis would incorporate the twin congressional goals of ensuring that advanced services are available to all Americans and that the Commission require unbundling of the ILEC networks in order to promote widespread deployment of competitive telecommunications services.

2. Does Section 251(d)(2) require the FCC to look at the service the

requesting carrier seeks to offer? (37) Or does Section 251(c)(3) compel the opposite conclusion?

Section 251(d)(2) requires the Commission to examine the service that the requesting carrier seeks to offer in order to determine impairment, consistent with Covad's discussion below.

- *Is it useful to do a service by service analysis or would that stifle innovation? (37)*[157]

It would stifle innovation to do a service by service analysis, and the Commission would risk technical redlining of service offerings, effectively limiting competitive carriers to service offerings that existed at the time of the Commission's unbundling analysis. Instead, the Commission can meet the requirements of Section 251(d)(2) by focusing upon the primary characteristics of the service sought to be offered, without specifically delineating those services beyond providing examples that explain the Commission's intent. Toward that end, Covad suggests that the Commission, in determining whether CLECs are impaired without access to loops and line sharing, examine only those alternatives that have the following primary characteristics: (1) the service can be provided over a stand-alone transmission facility or over the same line as the end user's voice service; (2) the connection is dedicated to the end user (not shared last mile connectivity) and is secure; (3) the service is always-on; and (4) the bandwidth for downstream transmission generally exceeds 600 kbps and for upstream transmission exceeds 128 kbps. This service grouping should be called Dedicated Broadband Access Services. Of course, as part of its analysis, the Commission must determine whether the CLEC that seeks to offer such a service is actually legally entitled to access the alleged alternative facility.

- *Should impairment look at individual carriers or all requesting carriers as a whole? (44)*

The Commission should look at all requesting carriers that seek to offer Dedicated Broadband Access Services. The experiences of and evidence offered by individual carriers is of course illustrative and should be put to use by the Commission in determining whether requesting carriers would be impaired.

- *Should elements be unbundled only for specific services? (38)*

No. Congress deliberately imposed a technology-agnostic unbundling regime, and the Commission has been consistent in adhering to the notion of technical neutrality in its unbundling rules. By basing its unbundling rules on transmission facilities, rather than on specific services, the Commission properly encourages innovative uses of bottleneck facilities. Service-specific unbundling of facilities would unreasonably deny consumers access to the full panoply of telecommunications services – both now in service, and yet to be developed – that CLECs can and will deploy over such facilities.

3. *Should the FCC consider the type of customer that a requesting carrier seeks to serve? (43) How should the FCC distinguish between customers?*

The Commission should not consider the type of customer that requesting carriers seek to serve in determining what elements should be unbundled, because that would be too cumbersome and involve the Commission in fruitless line-drawing exercises. At the same time, in order to fulfill its Section 706 mandate, the Commission should examine how particular market segments, such as small and medium sized businesses, would lose access to broadband services in the absence of unbundling obligations for ILECs.

4. *Should the FCC define UNEs and then determine whether requesting carriers are impaired or should it define impairments and then determine what UNEs to create? (20)*

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[157] The Commission also raised this question in paragraph 51 of the NPRM.

The Commission should define UNEs first, and then determine impairment. Indeed, the statute strongly suggests such a course. Congress defined "network element" in the definition section of the Act as an ILEC "facility or equipment" used to provide telecommunications services and all of the "features, functions and capabilities" of such facility or equipment.[158] Thus, the Commission has properly determined such facilities as loops, line sharing, transport, and OSS to be "network elements" pursuant to the statutory language defining that term. Having made that conclusion, the Commission should then proceed to determining whether the requesting CLEC would be impaired absent access to such network elements.

5. Over the last five years, where and how has investment by carriers led to innovations that benefited customers? (25)

DSL is the classic example of investment-driven innovation that has benefited customers over the last five years. Covad was the first carrier in the United States (and probably the world, for that matter) to make the affordability and power of DSL services available to end users in 1997. Covad's entry into the market, after raising nearly two billion dollars, brought residential and small business customers a set of affordable broadband services that were not previously available to them. Although ILECs have had access to DSL technology since the 1980s, they did not actually invest in providing services to residential end users until they were threatened by competition from Covad and other DSL carriers.[159] And the ILECs did not treat small business customers much better: ILECs used a form of DSL to provide T-1 services (HDSL), which they continued to market *and price* as traditional T-1 services, even though DSL cost dramatically less to

[158] 47 U.S.C. § 153(29).

provide. In fact, until very recently, few ILECs in the country provided business-class competitive broadband service to small business customers at a reasonable price.[160] But Covad and other CLECs made the investments necessary to serve this customer group starting in 1997. That network investment, and the deployment of innovative services to consumers and small/medium sized businesses, continues to this day.

6. In order to ensure that the FCC's unbundling analysis adequately considers the goal of encouraging deployment of advanced telecommunications capability, should the FCC consider whether this capability corresponds to a facility, service, market or something different? (26)

The Commission should simply determine whether continuing to mandate unbundled access to particular network elements will further deployment of advanced services to all Americans. If the answer is yes, then the Commission should maintain its unbundling regime. For example, as to line sharing, the answer is clearly yes, because line sharing permits Covad and other CLECs to deploy ADSL services to consumers, including varieties of ADSL services not provided by incumbents. As such, the continued unbundling of line sharing increases the availability of advanced services, allowing the Commission to fulfill its section 706 mandate.

7. Who should the FCC consider to be facilities-based for purposes of its analysis? (29)

The Commission should consider any carrier that deploys a substantial amount of its own facilities (even if it purchases unbundled network elements) to be a facilities-based carrier. Covad, for example, has deployed DSL equipment in over 1700 central

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159 *See* Dreazen, Ip, & Kulish, *Why the Sudden Rise in the Urge to Merge and Form Oligopolies?* Wall Street Journal (February 25, 2002).

160 Covad defines "business class broadband service" as an always-on Internet connection running at a minimum of 384 kbps for both uploading and downloading and priced at approximately $199/month (as opposed to roughly $1000/month for a ILEC's T-1 service). *See* Joint Declaration, ¶ 15 n. 7.

offices across the country, which allows it to design its own services (unlike a reseller of another carrier's facilities) and thereby innovate. The conclusion that Covad is a facilities-based carrier is consistent with Chairman Powell's statement to the Association for Local Telecommunications Services (on November 30, 2001) that:

> You should understand that when I speak of facilities-based providers we mean YOU, not just full facilities providers like cable companies. I recognize that access to the loop, critical network elements, and collocation remain important.[161]

This conclusion also comports with the Commission's statement in paragraph 30 of the NPRM that "reduced dependence on incumbent facilities does not necessarily mean that competitors must own all of their own facilities."

8. Does the fact that section 271 refers to "local" loops and switching have any bearing on the 251 analysis? (38)

Congress intended the Telecommunications Act (specifically 47 U.S.C. §§ 251 & 252) to accelerate the deployment of advanced telecommunications services into all markets, not just the local market.[162] However, in section 271, Congress was specifically concerned with balancing the BOCs' new power in the long distance market with increased market power of competitors in the local market. Congress's justified concern in Section 271 about the state of the local market should not color the Commission's interpretation of Sections 251 and 252, which Congress specifically intended to apply to all telecommunications markets.

9. Should the FCC take geography into account, as it did with unbundled switching? (39)

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[161] *See Remarks of Michael K. Powell Chairman, Federal Communications Commission At the Association for Local Telecommunications Services*, Crystal City, Virginia (November 30, 2001) (as prepared for delivery), available at http://www.fcc.gov/Speeches/Powell/2001/spmkp111.html.

[162] *See Local Competition Order*, ¶ 44 n. 18 ("The Commission's implementing rules should be designed 'to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition.'") (quoting Joint Explanatory Statement).

Geographic location is too blunt an indicator of impairment for the Commission to use. A geographic restriction on unbundled network elements would affect all customer classes, including residential subscribers, small business customers and large enterprise customers. For example, in major urban centers, there is typically a mix of all of these types of customers. Moreover, there can be counter-intuitive results, for some extremely large businesses locate their operations in rural areas, while certain urban areas have very large residential populations. A geographic restriction on network elements very easily could have the unintended consequence of encouraging competition for customers who need it the least while discouraging competition for those who need it the most. More importantly, such a geographic limitation would have the immediate effect of redlining consumers and businesses, guaranteeing competitive innovation and prices to only those consumers lucky enough to live in a geographic region where competition is permitted under the Commission's rules. It is also important to note that the Commission's decision to impose geography-defined limitations on switching availability was based on the technical fact that circuit switches can serve customers thousands of miles away from where those switches are based. Transmission facilities, such as loops and interoffice transport, cannot be geographically removed from the customers and central offices they connect.

10. How should the FCC weigh the benefits of more refined unbundling rules against the administrative burden of conducting the more detailed analysis and applying more complicated rules? (40)

The Commission has extensive experience since 1996 with the lengths to which ILECs will go to avoid the obligation to open their networks to competition. The pattern of litigation, denials of UNEs, and anticompetitive behavior is too long to draw out here.

The Commission well knows that, if it is not precise and specific in delineating the unbundling obligations it imposes on ILECs, those carriers will simply ignore the Commission's rules. Precision through refined rules simply means clarity, not complexity. The Commission needs not be concerned about imposing burdens on carriers by making its rules clear – if anything, the Commission avoids burdensome litigation and uncertainty by specifically delineating the parameters of its rules.

11. Should the FCC differentiate between UNEs based upon their transmission capacity? (41)

No, the Commission should not do so. As with geographic location, transmission capacity cuts across all customer groups. For example, carriers use high capacity transport to serve every demographic from one-line residential subscribers to large enterprise customers. A transmission capacity restriction would simply retard competition in all markets, rather than encouraging it in any particular market. More importantly, a transmission facility is capable of as high a speed as technologists can invent equipment to generate, and the Commission would stifle such innovation if it artificially capped the speed and bandwidth capabilities of unbundled loops. There is no justification whatsoever for an arbitrary technical limitation on the unbundling of those bottleneck facilities. Indeed, the Commission would only serve to stifle innovation and, perversely, deny service to consumers from anyone other than the ILEC when such consumers demand high-bandwidth services.

- *Couldn't carriers self-provision extremely high capacity services because those are most economical to do oneself?*

It is not true that carriers could economically self-provision high capacity facilities. High-capacity services still travel over local loop transmission facilities, which

are bottleneck facilities that no entity could ever hope to duplicate. Covad, for one, is not in the business of constructing transmission facilities that duplicate the nationwide monopoly transmission plant that already reaches virtually every home and business in the country. Covad lacks the expertise and incredible capital necessary to acquire rights of way, dig up the streets and build transmission facilities.[163] As described above, those few carriers that have attempted to do so have largely failed. Indeed, it is hard to imagine the kind of opportunity costs that would force Covad to develop that expertise and undertake that nationwide buildout from scratch. As discussed above, Congress intended to unbundle transmission facilities, both loop and interoffice, based on the historic monopoly control over such facilities.

12. Should the FCC distinguish between elements based upon whether they provide local services and toll services?

No. The Commission should not attempt to distinguish between network elements based upon whether they provide local or toll services, because most elements provide a combination of both services. Again, Congress did not intend that the Commission draw arbitrary distinctions in its unbundling decisions. In this case, the Commission could be denying consumers who sought integrated local and toll service offerings from a single CLEC provider any access to such a provider. In addition, it would be an administrative nightmare to attempt to track which of the two services an element provides at any given time.[164] Any such process would inhibit innovation by itself and without regard to whether the Commission actually restricts the use of a certain network element for either kind of service.

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163 *See* Joint Declaration, at ¶ 45.

164 For similar reasons, the Commission already applies a brightline rule to assume jurisdiction over dedicated DSL facilities on which more than 10% of the traffic is interstate.

13. Should the FCC distinguish between facilities that are circuit-switched versus packet-switched? (41)

In the first instance, there is no such distinction as to loop and line sharing facilities – such facilities should be unbundled regardless of the transmission mode that a carrier intends to utilize. Indeed, a bottleneck transmission facility is not transformed into a non-bottleneck facility based on the service protocol that a carrier uses to establish a transmission pathway over that facility. The Commission should not make a distinction based on what type of switch is attached to a loop or transport facility. Requesting carriers should be free to use the technology that is most efficient for their business plan. Otherwise, the Commission quickly will find itself choosing winners and losers in the market.

14. Should the FCC adopt sunsets or other mechanisms to phase out UNEs? (45)

No. The Commission should continue its current practice of reviewing whether requesting carriers are impaired every three years. The Commission cannot abdicate its responsibility to make this determination to sunsets or other mechanisms to phase out network elements. Section 251(d)(2) states plainly that the Commission "shall consider, at a minimum, whether" requesting carriers are impaired. There is no room under this provision for mechanisms that free the Commission from having to make the impairment analysis.

- *Could performance metrics be used as triggers for phasing out UNEs? (45)*

In addition to its general opposition to such phase-out triggers, Covad opposes using the Commission's performance metrics (to be adopted in CC Docket No. 01-318) as a trigger for discontinuing the availability of network elements. There is no rational

relationship between an ILEC's performance in providing a network element and the level of impairment that requesting carriers face in the absence of that element. It would be the more than just ironic to tell requesting carriers that have complained for years of poor ILEC performance in providing certain network elements that, when the ILEC finally achieves adequate performance, such elements are no longer available.[165] Covad does, of course, strongly support the Commission's rapid action in Docket 01-318 to adopt national UNE performance metrics and associated penalties.

15. Should each state decide whether there is impairment for each network element? (78)

The Commission should maintain its longstanding policy of ensuring that its UNE rules are a floor, not a ceiling. Thus, while state commissions are free to adopt additional unbundling requirements as they see fit, they may not in any way interfere with the operation of the Commission's federal UNE rules. The Commission should not defer to state determinations of impairment. "Congress has charged the Commission in section 251(d)(2) with 'determining what network elements should be made available for purposes of subsection [251](c)(3).'"[166] That is not a duty that the Commission should *or could* discard easily. Moreover, as the Commission has previously recognized, there is great value to having national and uniform unbundling rules:

> We find that a national list of unbundled elements will encourage the rapid introduction of competition in the greatest number of markets because it will provide competitive LECs with certainty regarding the availability of network elements.[167]

The Commission also found that:

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165 This answer also applies to a similar question raised in paragraph 78 of the NPRM.

166 *See UNE Remand Order*, ¶ 123.

167 *Id*., ¶ 125.

> A national list of unbundled elements will allow requesting carriers to enter local markets in a manner that will allow them to approach the incumbent LECs' historic economies of scale, scope, and ubiquity, thereby promoting rapid competition for all customers, including residential and small business customers, in all areas of the country.[168]

These conclusions remain sound and should guide the Commission's decisions in this proceeding.

CONCLUSION

The Commission should send a strong message to the ILECs that they should fulfill Congress's vision by using the availability of UNEs to compete against one another, instead of advocating the removal of UNE rules in order to further entrench their monopolies. The ILECs' failure to use UNEs as a market entry mechanism to compete against each other speaks volumes.

The Commission should not change its UNEs rules in any manner that would impair the ability of CLECs that rely on Congress's unbundling mandate to serve consumers. Like that of other CLECs, Covad's continued viability and its future success in keeping the competitive dynamic alive have an eggshell dimension to them. Federal telecommunications policy, and its potential for teeter-tottering, poses the largest single risk factor for Covad's business. In the ironic name of regulatory certainty, the Commission has in recent months cast a long shadow over the future of competition. So long as the Commission does not take any action to impair its business, Covad is extremely confident that it will continue to bring the benefits of local telecommunications competition to consumers in the same way that MCI brought the benefits of long distance competition to consumers. The current state of the capital markets underscore the fact

[168] *Id*., ¶ 126.

that the business of CLECs like Covad will be more impaired now by the lack of UNEs than when the Commission adopted first its UNE rules.

For the foregoing reasons, the Commission should continue to make available the following UNEs:

- Loops, regardless of makeup (including copper loops, copper/fiber loops, and high-capacity loops);
- Line sharing
- Interoffice transport; and
- Operations Support Systems.

Respectfully submitted,

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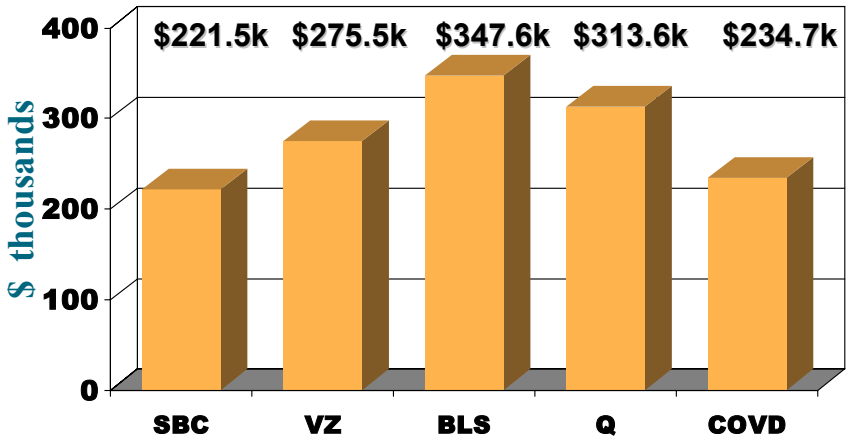
Appendix A

Annualized Revenue/Employee



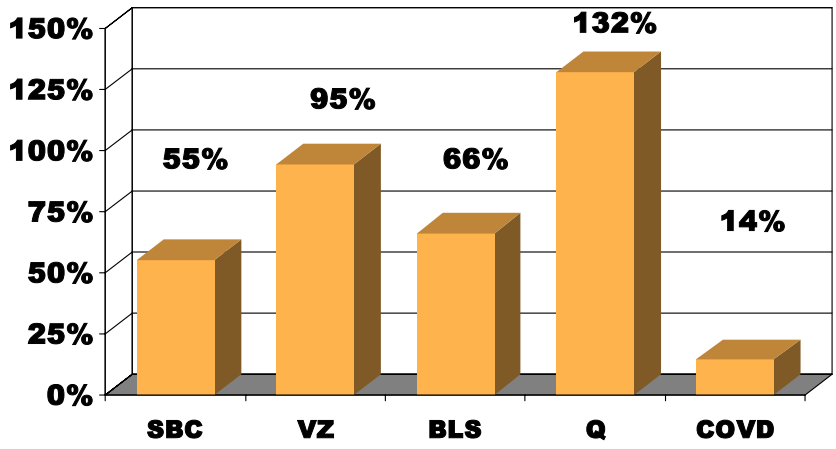
Source: Company research as of fourth quarter 2001

3 Covad Confidential

COVAD

Appendix B

Debt to Annualized Revenue



Source: Company research as of fourth quarter 2001

COVAD